# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 631.—Vol. XVII. LONDON, SATURDAY, SEPTEMBER 25, 1847. [Price 6d.


VALUABLE MINING MACHINERY AND MATERIALS FOR SALE.

MR. CLYMA and Mr. EDSALL have received instructions to submit TO SALE, BY PUBLIC AUCTION, on Monday, the 4th day of October next, and following days, at Eleven o'clock in the forenoon of each day, at TING-TANG CONSOLS MINE, in the parish of GWENNAP, the whole of the valuable

MINING MACHINERY AND MATERIALS THEREON—VIZ.:

1 60 and 100-inch combined cylinder STEAM-ENGINE, 9-feet stroke in the cylinder, and 8½-feet in the shaft, with first piece of rod, and three boilers, about 33 tons.
1 19 and 36-inch ditto ditto, with one boiler, about 10 tons.
2 capstans and shears; 3 balance-bobs.
25 9-feet 16-inch pumps, 4 8-feet 16-inch ditto, 37 9-feet 15-inch ditto, 15 9-feet 13-inch ditto, 24 9-feet 10-inch ditto, 14 9-feet 9-inch ditto.
3 13-inch plunger-poles and cases, with stuffing boxes and glands to match.
1 14-inch ditto ditto ditto.
4 13-inch H-pieces, 1 14-inch ditto.
5 13-inch doorpieces, 1 14-inch ditto, 1 12-inch ditto, 1 10-inch ditto.
3 13-inch windbores, 1 14-inch ditto, 2 12-inch ditto, 1 9-inch ditto.
2 13-inch working barrels, 1 12-inch ditto, 3 8-inch ditto, 1 6-inch ditto.
270 fathoms of 14½-inch patent cable-laid capstan-rope.
800 fathoms of 5th chain, 200 fathoms of 9-16th ditto.
250 fathoms of whim-chain; 260 fathoms of 6-inch whim-ropes.
150 fathoms of 13 to 16-inch rods, 35 fathoms of 9-inch ditto.

Eight horse-whims, 150 fathoms iron-staved ladders, 150 fathoms wood ditto, 40 fms. 4-inch iron air pipes, 100 fathoms wood ditto, 200 fathoms flat rods, an excellent dial, 300 fathoms of 12 and 13-inch launders, two angle bobs with gudgeons, braces, &c., complete, 12 4-feet, and 30 2-feet iron sheaves, a dray, bucket rods, prongs, joints, and caps, staples and glands, rod and flange bolts and nuts, rod pins, pump rings, fagoted rod plates, Iron winch, two pairs of large and one pair of small iron blocks, two beams, scales and stands, and brass and iron weights, four pairs large yokes, three tram waggons, kibbies, pumping-engine, one patent lifting jack, four smiths' bellows, 46, 42, and 40-inch, four anvils, mandril, smiths' and miners' tools, screw stocks, taps and plates, bishops heads, 100 gallons of olive and rape oil, a large quantity of brass, new and old iron and steel, a quantity of useful new and old timber, and other useful materials, together with the ACCOUNT-HOUSE FURNITURE, desks, kitchen apparatus, register stoves, &c.

The attention of mine agents and others is particularly called to the above materials, which will be found, on inspection, to be in very superior condition, nearly the whole of which have been supplied new to the mine within the last three years. For viewing the same application may be made on the mine, and further particulars obtained from the auctioneers, Truro.—Dated Truro, Sept. 22, 1847.

VALUABLE MINE MATERIALS FOR SALE, BY AUCTION.

MR. WILLIAM RICHARDS, Auctioneer, will submit FOR SALE, BY PUBLIC AUCTION, on Wednesday, the 6th day of October next, at Eleven o'clock in the forenoon, at the NORTH UNITED MINES, in the parish of ZENNOR, in the county of CORNWALL, the following superior

MINING MATERIALS,

THE WHOLE OF WHICH ARE NEARLY NEW—VIZ.:

A first-rate PUMPING-ENGINE (from the manufactory of Messrs. Harvey and Co., at Hayle Foundry, in 1845), 30-inch 9-feet stroke cylinder—7 feet in the shaft—with a boiler, 8½ tons.
PUMPS—60 fathoms 6-inch, 20 fathoms 5-inch, 90 fathoms 5 inch, 18 fms. 4½-inch.
2 6-inch poles and bottoms; 2 5-inch ditto; 1 4-inch ditto.
2 5-inch working barrels; 2 4½-inch ditto.—Several windbores.
60 fathoms iron rods, at surface.
80 fathoms 7-inch wood rods; 20 fathoms 5-inch ditto; 90 fathoms 5½ and 6-inch ditto.
2 balance-bobs; capstan shears.
120 fathoms new 8-inch capstan-rope; 36-inch bellows.
Anvil and smiths' tools, horse-whim, &c., cage-whim and horse-whim, small capstan, 160 fathoms 7-16th whim-chain, 80 fathoms 9-16th ditto, horse-whim kibbles, &c.
Sundry lots of timber, new and old.—ACCOUNT-HOUSE FURNITURE, &c.

The attention of mine agents and adventurers in mines is particularly invited—the whole of the materials, having been carefully selected, are well adapted for general mining purposes, and the engine will be found to be one of the best in the county of Cornwall.

For viewing the above, application should be made to the agents, on the mines; or to Mr. Samuel Higgs, Green Market, Penzance, the purser; and for further particulars, to Mr. William Richards, auctioneer, 17, Regent-terrace, Penzance.
Dated Sept. 22, 1847.

TO BE PEREMPTORILY SOLD, BY AUCTION.

MR. BOWEN will SELL, BY AUCTION, in One Lot, pursuant to a decree of the High Court of Chancery, made in a cause of "Birch *against* Price," with the approbation of Sir William Horne, one of the Masters of the said Court, at the Lion Inn, Wrexham, in the county of Denbigh, on Tuesday, the 12th day of October, 1847, at Three o'clock in the afternoon, the FREEHOLD ESTATE, consisting of

PLAS-MOSTYN FARM, COLLIERIES, AND MINERALS OF COAL AND IRONSTONE,

SITUATE IN THE SAID PARISH OF WREXHAM.

Particulars may be had gratis: in London, at the said Master's chambers, Southampton-buildings, Chancery-lane; Messrs. Milne, Parry, Milne, and Morris, solicitors, Harcourt-buildings, Temple; of Messrs. Hughes, Fairfoot, and Webb, solicitors, Clement's Inn: and in the country, of Mr. Exuperius Pickering, mine agent and valuer, Ruabon; Mr. Jones, solicitor, Brynhyfryd, Ruthin; and Mr. Humphreys Jones, solicitor, Wrexham; at the place of sale; and at the principal inns, in Ruabon, Liverpool, Manchester, Chester, Shrewsbury, Wolverhampton, and Birmingham.

WALL'S END COLLIERY.—TO BE LET, and entered upon on or after the 20th November next, for such a term of years as may be agreed upon, all that current-going COLLIERY, well known by the name of WALL'S END COLLIERY, at present held by William Russell, Esq., under lease from the Dean and Chapter of Durham—comprising the COAL MINES under the whole of the lands in the township of WALL'S END, in the county of Northumberland.

The Low Main and the Beaumont Seams, which have been bored to, remain throughout untouched; and the Beadham Seam supplies the vend of the existing colliery.

The colliery is contiguous to, and has shipping berths in, the River Tyne.

Plans of the workings of the colliery, and further particulars, may be known on application to Mr. E. F. Boyd, Urpeth Colliery, Chester-le-street; or at the office of the Registrar of the Dean and Chapter of Durham, Durham.
Durham, Sept. 11, 1847.

DUDDINGSTONE AND BRUNSTAIN COAL-FIELDS near EDINBURGH, TO BE LET, as detailed in former advertisements. The SEAMS OF COAL are numerous, and BLACKBAND IRONSTONE may be expected in the lands, similar to that which has been recently discovered at Gilmerton, Dryden, and Greenlaw, in the same range of coal strata. Excellent LIMESTONE is known in the lands.—The near vicinity to the City and Portobello, besides other markets now opened by railway, and also the harbours of Leith and Fisherrow, with all which the existing railway, passing through the estate, connects, renders it now very eligible for colliery operations. There are two steam-engines, and other colliery machinery, at the pits, one of which is nearly sunk to the Jewel Coal.

Offers for a lease to be addressed to Mr. Geddes, 49, Albany-street, Edinburgh.
July 29, 1847.

PONTYPOOL, MONMOUTHSHIRE.—TO BE LET, for a long term, the important and valuable property known as the PONTYPOOL IRON AND TIN-PLATE WORKS, and comprising a most extensive and productive TRACT of MINERALS, of which about 1700 acres are still unexhausted, together with the BLAST-FURNACES, FORGES, and TIN MILLS, connected therewith. Four blast-furnaces have been erected on the property, and the average weekly make of each is not less than 100 tons of iron, of the best quality. There are also three forges in operation, which possess ample steam and water-power for the production, weekly, of 120 tons of hammered charcoal bars, 60 tons of coke bars, and 200 tons of merchant bars.

The TIN MILLS, which have been erected at a very considerable expense, are replete with every requisite and convenience; and, in connection with the forges, make, at present, 1200 boxes of tin-plates per week.

The whole of the machinery is of the best construction, and in excellent working order. There are seven steam-engines and ten water-wheels employed at the works and mines; and the property is intersected in every part by convenient and well-constructed tramroads.

The FARM LANDS, consisting of about 400 acres, of well cultivated and productive land, will be included in the lease, together with about 250 agents' and workmen's houses, sale yard for coal, coal-tar works, gas works, brick works, limestone quarries and kilns, stone quarries, and every other necessary appendages to an extensive work.

The property contains numerous SEAMS of COAL and IRON ORE, of superior quality; one coal vein alone, which is peculiarly adapted for smelting, being considered capable of supplying no less than 12 blast-furnaces with fuel for fully 50 years.

An extensive colliery might also be established, with considerable advantage, in connection with the works, as the coals are highly approved of for steam, coking, and domestic purposes. The whole of the minerals may be "won" as comparatively moderate depths, and can be worked very cheaply.

The mines already opened are sufficiently extensive to furnish the existing works with materials for a considerable period. The property is situated within 10 miles of the port of Newport. The Monmouthshire Canal passes close to the works; and, with the Newport and Pontypool Railway, now in process of construction, will afford a cheap and convenient mode of communication with the shipping port. The Newport, Abergavenny, and Hereford Railway, with the extension line to Taff Vale, will likewise be carried through the property, and thus establish a direct connection with Liverpool, and the midland and northern districts of England.

Applications, for terms and particulars, to be made to Messrs. Llewellin and Nephew, mining engineers, Pontypool; or to Messrs. Prothero, Towgood, and Fox, solicitors, Newport, Monmouthshire.

TO BE LET, for a term, a very commanding WATER-POWER, with WHEEL, MILLHOUSE, WAREHOUSE, &c., fit for carrying on any kind of manufacture, situated about seven miles from two seaports of the Bristol Channel, opposite South Wales. The black hematite, in great abundance, close at hand.

Further particulars to be had of Mr. S. Woolcott, Sandhill Park, Taunton, Somerset.

MINES OF EMERY.—NOTICE.—The MINISTRY of FINANCE, at ATHENS, gives the FOLLOWING NOTICE, by a ROYAL DECREE, dated 10th July, old style:—

The EMERY STONE, which is dug up and collected at the island of Naxos, consisting of about 30,000 cantars, is TO BE DISPOSED OF, BY AUCTION, on the following conditions—namely,

1. This quantity of Emery Stone will be disposed of by auction, in portions not exceeding 3000 cantars.

2. The auction to take place here, at the usual place, under the superintendence of the Financial Ephore of Attica, in the presence of the Governors of Attica and Beotia, and is to commence three months after the publication of the present Notice in the Government newspaper—that is to say, the 21st October next, old style.

3. Each lot will be exposed for auction, during the space of three days, from Nine o'clock to Eleven, A.M.; and, on the third day, one hour after the last bid, the auction will be closed, and the assignment made—always with this reservation—namely, the approval of the Ministry, described in the 7th article of the present Notice.

4. A second portion may also be disposed of during the same three days; but, in such case, the second auction must take place in the afternoon, from Three to Five o'clock.

5. Each bidder to advance not less than 50 drachmes.

6. Any party is allowed to hand in, during the sale, to the authority superintending it, a written sealed offer; which, at the termination of the auction, is to be opened in the presence of the bidder, and, if exceeding the highest offer previously made by 50 drachmes, such bidder will be entered in the memorandum of sale, and the assignment made to him.

7. At the close of each auction, the Financial Ephore will submit the acts to the consideration of the Ministry (according to the statutes), and the Ministry, within five days after they have been submitted, will approve, or reject, them, in case the price offered should not be considered an advantageous one; but, should this time elapse without any reply on the part of the Ministry, the auction is to be considered valid.

8. The money is to be paid in two instalments—the one five days after the publication of the approval of the acts of auction to the buyer, and the other as soon as the reception of the Emery has commenced—which the buyer will be obliged to complete within the course of two months after the approval of the Ministry is published.

9. The delivery of the Emery Stone is to be made to the buyers, by the superintendent, on the beach at Naxos, where it is collected in heaps.

10. The dues to the auctioneer, and the stamped receipts for the payment, are to be at the charge of the buyers. Signed at Athens, the 19th (30th) July, 1847.

(Signed) The Minister—N. CORFIOTAKIS.
D. LEONIDAS.

FOR SALE, AT TRENOW CONSOLS MINE, NEAR MARAZION, in the county of Cornwall, an 85-inch cylinder STEAM PUMPING-ENGINE, 10-feet stroke, equal beam, with three boilers, of 36½ tons; with numerous MINING MATERIALS, well worthy the attention of mine adventurers and agents.

Application to be made to the agents at the mine; or to Mr. Henry Thomas, Mining Offices, 8, George-yard, Lombard-street, London.—Dated July 15, 1847.

FOR SALE, AT TRETOIL MINE, LANIVET, NEAR BODMIN, CORNWALL.—1 66-inch cylinder STEAM PUMPING ENGINE, with two boilers, about 20 tons, complete—one other boiler, about 12 tons; 1 21-inch cylinder STEAM PUMPING-ENGINE; and numerous ARTICLES, well worthy of attention.

Apply to Mr. Henry Thomas, 8, George-yard, Lombard-street, London; Mr. George Geach, Bodmin; or to Capt. Henry Williams, at the mine.—Dated July 15, 1847.

FOR SALE—THE LANIVET CONSOLS MINE, near BODMIN, CORNWALL, with STEAM-ENGINE, of 80-inch cylinder, crusher, and suitable MATERIALS.—The prospects of this MINE are very favourable; it is sunk to the 80 fathom level, having improved considerably in depth. The undertaking is well worthy the attention of mine adventurers, and is now offered, in consequence of the principal shareholder being unable to continue his interest.

Application to be made to Mr. Henry Thomas, secretary of the company, 8, George-yard, Lombard-street, London; and to Capt. Henry Williams, on the mine, who will afford every facility for inspection, and give every necessary information.

*[Immediate attention is requested, as this advertisement will not be repeated.]*
Sept. 24, 1847.

WHEAL CURTIS COPPER MINING COMPANY.—This company being now COMPLETELY REGISTERED, pursuant to the Act of 7th and 8th Vic., cap. 110—Notice is hereby given, that the board of directors have this day made a CALL of ONE POUND per share on the shares in this company, PAYABLE in two instalments, of 10s. each: the first instalment is payable on or before the 21st day of October, and the second is payable on or before the 23d day of December next; and the proprietors of shares are requested to pay the said call to Messrs. Hankey, 7, Fenchurch-street, London.

Interest, at the rate of £5 per cent. per annum, will be allowed on sums paid in advance, beyond the sums actually called for. The bankers have instructions to charge interest at the rate of £5 per cent. per annum, on all sums not paid by the days above appointed. By order, GEORGE A. JACOB, Secretary.
Basinghall-chambers, Basinghall-street, London, September 23, 1847.

All persons holding scrip certificates for shares in the above company, are requested to transmit the same to these offices, to be exchanged for share certificates.

BRYN-YR-EGLWYS SLATE AND SLAB QUARRIES, NEAR ABERDOVEY, MERIONETHSHIRE.

In compliance with an advertisement, published by the proprietor, Mr. John Pughe, of Aberdovey, in the month of April last, that, in six months from that date, would be offered to the public a number of shares in the above quarries.

That advertisement runs thus:—Two years ago, have been leased to the proprietor, for the term of 50 years, at a small fixed rent, and, in other respects, on very reasonable terms. From the commencement, the said proprietor has been removing coverings of peat and earth from the surfaces—driving levels, making roads, bridges, and other conveniences, as well as digging for, and obtaining great quantities of slates, and slabs, of the first-rate qualities.

The veins in these quarries are the celebrated Aberlleyfeny, which are known to be equal to the best in the kingdom, in point of wear—part of the mansion of Green-fields, in Machynlleth, the residence of Sir John Edwards, Bart., having been covered by them more than a century since; and, from that time to the present, no ladder has been required to be placed on it for repairing or fresh-making. The colour of Bryn-yr-Eglwys slate and slabs is a beautiful light blue; the split is superior, and manageable to any thickness, and so even that it cannot be excelled; they rise in the rocks generally from 2 feet to 8 feet in length, and from 1½ feet to 4 feet in breadth; they have gone through the ordeal of frost, snow, rain, fire, and sun-heat—sustaining all with perfect indifference.

The proprietor is now preparing a large building, to contain many machines for sawing, planing, and turning, and will then be able to produce, at the quarries, specimens of the first-rate qualities, in tombstones, chimney and mantel-pieces, tables, and all other articles, large and small, equal to any quarry in Wales. The said proprietor does not wish, or intend, to receive a shilling of any person's money for or on account of shares, before he has, by himself, or a thorough judge in the trade, viewed and examined the quarries and their produce.

There are two powerful streams of water running through the works, capable of, and are being brought into one body for, working water-wheels for the concern, which are now in a state of preparation. Such streams never fail of a sufficient supply for great works—always ready to act with full power, and the rocks ready also to produce any quantity for a time, beyond the power of imagination, in length, breadth, and depth combined. A road, for conveying the produce, is intended very soon to be commenced; the distance from the quarries to the edge of the River Dovey being just four miles; from that spot they will be taken in boats to a wharf at Aberdovey, at the expense of 18d. per ton, where vessels of several hundred tons can take their loading: so, with voice, hearts, and hands, proceed the quarries will.

The only reasons the proprietor has in parting with any shares, is infirmity of body and increase of age. Within the distance of a mile is a wonderfully advantageous place, wherefrom a tunnel may be driven to, and under, an immense depth below the quarries—should the proprietor, or a company, at some time hence, come to a determination to do so.

The proprietor now wishes further to acquaint the public, that, in three months' time, the large building will be completed, together with all the machinery therein intended to be employed, will be perfectly at work.

Since the month of April the quarry rocks have undergone a more effectual trial, and the quarries of the United Kingdom are CHALLENGED to produce better metal—more capable of splitting thin and even—to take a better polish—to raise slates of larger and more convenient sizes—to lie more advantageous for raising from the rocks.

As the SHARES will BE SOLD so LOW, as to admit almost the humblest individual to make purchases, the proprietor begs to add, that he will not be disposed to admit any partners except such as are very respectable, and to sell no person less than 20 shares.

The proprietor challenges all the other slate quarries in Wales to show that either of them can make so good a profit as the Bryn-yr-Eglwys concern, in proportion to the money expended.

Should any personal applications, or inquiries, be made with the proprietor, Mr. John Pughe, Brynawel, Aberdovey, in the interim, he will be happy to give every further information on the subject.

THE PATENT OFFICE AND DESIGNS REGISTRY, *No. 210, STRAND, LONDON.*

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

TO IRONMASTERS.—WANTED, ONE THOUSAND TONS of 56 lbs. RAILS, by the end of March next—delivered on board at Cardiff or Newport.—Apply to Mr. C. H. Capper, engineer, Birmingham.

ARTICLED PUPIL.—A VACANCY occurs for an ARTICLED PUPIL, in an established house, where he will have an opportunity of acquiring MECHANICAL DRAWING, and complete insight into ENGINEERING, MECHANICS, &c. As the object is to obtain a talented youth, the premium will be moderate, and a salary be given after the first year—increasing annually during the articles.—Address "S. P. Q. R.," care of Mr. Hussy, bootmaker, 310, Strand.

MINING JOURNAL.—TO BE SOLD, the FIRST SEVEN VOLUMES of *THE MINING JOURNAL*, in good condition.—Nos. 46, 47, 48, 49, Vol. III., and Nos. 102, 112, 113, and 114, Vol. V., are wanting.—Now lying at the office of the *Mining Journal*, 26, Fleet-street, London.

MINING OFFICES—ESTABLISHED THIRTEEN YEARS.—WILLIAM TRENERY begs to inform his friends and the public, that he has REMOVED from No. 50, Threadneedle-street, to *No. 9, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.*

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
*THREE KING'S COURT, LOMBARD-STREET, LONDON.*

*MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.*

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.*

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

JAMES LANE, MINING SHARE DEALER, 75, *OLD BROAD-STREET, LONDON.*

RICHARD BOOT, ACCOUNTANT, MINE AND RAILWAY SHAREBROKER, COMMERCIAL AND GENERAL AGENT, *REDRUTH.*

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON.—PROSPECTUSES may be had, and ORIGINAL SHARES ALLOTTED in the COPPER and SILVER-LEAD MINES connected with these offices, on application to the secretary, THOS. HENRY TAUNTON.

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.
6, Bank Chambers, opposite the Bank of England.

DYFNGWM LEAD MINES, NORTH WALES. CONDUCTED ON THE COST-BOOK SYSTEM.
*OFFICES—33, OLD JEWRY.*
Where sections and plans of the mine may be seen, and all information obtained.

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*
The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen.

MEXICAN AND SOUTH AMERICAN COMPANY, 10, New Broad-street Mews, 24th Sept., 1847.—Notice is hereby given, that the directors of this company have made a CALL of ONE POUND per share on the shares in this company; and that the same is to be PAID on the 26th of October next, to Messrs. Barclay, Bevan, and Co., for account of the directors.
H. W. SCHNEIDER, Managing Director.
N.B.—The bankers' receipt is to be brought to this office, with the certificate of the shares, which must be left one clear day, to have the payment endorsed thereon.

TINCROFT MINING COMPANY.—Notice is hereby given, that a GENERAL MEETING of the shareholders in the above company will be HELD at this office on Thursday, the 30th inst., at Two o'clock precisely.
44, Finsbury-square, London, Sept. 8, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be HELD at the office, as under, on Wednesday, the 6th October next, at One o'clock precisely. WM. NICHOLSON, Secretary.
57, Old Broad-street, Sept. 14, 1847.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you: they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
*23, HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had: at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 6d.

PATENT GALVANISED IRON AND WIRE ROPE WORKS *MILLWALL, POPLAR.*
ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

COMMERCIAL ELECTRIC TELEGRAPH.—The only really COMMERCIAL TELEGRAPH is that which may be used for ALL PURPOSES, without restriction—upon which terms Messrs. BRETT & LITTLE are prepared to GRANT LICENSES for their ELECTRO-TELEGRAPHIC CONVERSER.
For tickets to inspect, apply to BRETT & LITTLE, Furnival's Inn, London.

METAL CASTINGS—ROGERSTONE HAMLET FOUNDRY, NEWPORT, MONMOUTHSHIRE.
CARR & WILTHEW beg to announce, that they have COMMENCED the FOUNDRY BUSINESS, in the LOOM and SAND DEPARTMENTS; and trust, by strict attention and superior workmanship, to merit a share of public patronage.
T. CARR having had, for many years, the superintendence of the most extensive foundries in the north (Newcastle-on-Tyne), where his practical experience in CASTING all sizes and kinds, for LOCOMOTIVE ENGINE WORK, &c., was most eminently successful, they flatter themselves in being able to give every satisfaction to those ... ing them with orders.—Sept. 22, 1847.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS.—PERCIVAL'S IMPROVED MACHINERY and AXLES of every description of machinery and axles of every kind where ANTI-FRICTION GREASE is—after trial—the most useful, economical, and best preventive of constant friction is kept up—admitted public.
... paration of the kind ever offered ... practical men can be given, and testimonials shown of its ... References to scientific men forwarded on application at the manufactory, Green-street, ... great excellence, Blackfriars-road, London.
Wellington-st...

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS,
TUBES FOR STEAM, GAS, AND OTHER PURPOSES,
*ALL SORTS OF GAS FITTINGS.*

THE BIRMINGHAM PATENT IRON TUBE COMPANY,
49, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,
MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.
42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.
*WORKS—SMETHWICK, STAFFORDSHIRE.* 39
LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 40
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

LONDON AND PROVINCIAL JOINT-STOCK LIFE INSURANCE COMPANY.—The DIRECTORS invite the public generally, also BUILDING SOCIETIES and BORROWERS, through them or from other parties, to examine the peculiar system and striking advantages offered by this office.
Every description of life assurance, investment, and loan business transacted.
Low rates of premium and three-fourths of profits divided. 41
For prospectuses, &c., apply to JOHN MASSON, Secretary.
Offices, 39, Nicholas-lane, Lombard-street.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,
26, *CORNHILL, LONDON.*
Capital £500,000.—Empowered by Act of Parliament.
This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.
Assurances for terms of years are granted on the lowest possible rates. 42
DIVISION OF PROFITS.
The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.
EXAMPLES.

| Age | Sum. | Prem. | Year. | Bonus added. | Bonus in Cash. | Permanent reduction of Premium. | Assured may Borrow. |
|---|---|---|---|---|---|---|---|
| 60 | £1000 | £0 3 4 | 1837 | £217 15 1 | £109 0 11 | £16 0 4 | £445 0 0 |
| | | | 1838 | 192 3 0 | 87 1 4 | 13 10 2 | 395 11 1 |
| | | | 1839 | 165 11 10 | 74 1 9 | 11 3 1 | 346 2 3 |
| | | | 1840 | 116 7 6 | 54 0 10 | 7 18 10 | 296 13 4 |
| | | | 1841 | 111 6 8 | 49 10 0 | 7 10 4 | 247 4 5 |

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c. 43
By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.
REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*
Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; A. Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 11, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.
Just published (in a sealed envelope), price 2s. 6d.; or post-paid to any address, 3s. 6d., in Post-office order or stamps,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and on those Secret Infirmities and Disorders of Youth and Maturity that are usually acquired at an early period of life, which tend to destroy physical and mental energy, ardour, passion, and all the attributes of manhood. Illustrated with twenty-five coloured engravings, on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and showing the injuries that are produced in them, by solitary habits, excesses and infection. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LAMERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries' Hall, London, &c. 44
REVIEWS OF THE WORK.
"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*
"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*
Published by the author; and may be had from Kent and Richards, 51 and 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 148, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and by all booksellers.—At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c. The work may be had direct from the author's residence, and will be forwarded, free by post, to any address for 3s. 6d. in postage stamps.—9, Bedford-street, Bedford-square.

Illustrated by 26 Anatomical Coloured Engravings on Steel, On Physical Disqualifications Generative Incapacity, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 3s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities and decay of the generative system, from excessive indulgence, infection, and the inordinate use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. PERRY & Co., 19, Berners-street, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Tichborne-street, Haymarket; and Gordon 146, Leadenhall-street. 45
PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—PART THE SECOND treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse, of mercury are also clearly pointed out. This section is illustrated by 17 coloured engravings.—PART THE FOURTH treats of Perry's Preventative Lotion, by the use of which the dangers of infection are obviated. Its action is simple but sure; it combines with the virus chemically, and destroys its power on the system.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.
THE CORDIAL BALM OF SYRIACUM is exclusively employed in treating nervous and sexual debility, impotence, &c., 11s. and 33s. per bottle.—THE CONCENTRATED INFECTIVE ESSENCE, an anti-syphilitic remedy, for purifying the blood in cases of bottle.—PE[illegible]dary symptoms, eruptions, and the abuse of mercury, 11s. and 33s. per a certain remedy.—PURIFYING SPECIFIC PILLS, 2s. 9d., 4s. 6d., and 11s. per box—der.—PERRY'S PRE[illegible]ions, gleet, strictures, and chronic inflammation of the bladder infection, 34s. a bottle.—DESTRUCTIVE LOTION, an application to obviate the danger of be had at the establishment only; fee, if by letter, £1. £5 packets, with advice, to 19, Berners-street, from 11 to 2, and 7 to 8; the fee, £1, is saved.—Attendance daily at
Sold by Sutton and Co., 10, Bow Churchyard; Sundays, from 11 to 1.
Barclay and Sons, Farringdon-street; Butler, 4, Cheapside; Edwards, 67, St. Paul's Churchyard; Hill, New Cross; W. B. Jones, chemist, Kingston; J. R. Johnston, 63, Cornhill; Windsor; J. B. Shillock, Bromley; T. Riches, London-stree[illegible]er, Egham; S. Smith, Woolwich; Ede and Co., Dorking; and John Thurlby, High-street, Lewisham; T. Parkes, may be had the *Silent Friend.* [illegible]d—of whom


## WHEAL CONCORD MINING COMPANY.

*Tavistock district of the Devon County Court.—Before W. M. Pryce, Esq., Judge.*
IN THE MATTER OF J. BROWNSON, HIGH BAILIFF OF THE COURT.

In this case, Mr. BEER, solicitor, of Devonport, appeared on behalf of certain adventurers in Wheal Concord Mine, to support the charge of misconduct against the high bailiff, under the 116th section of the Small Debts' Act. Mr. ROBINS appeared for the defence.

On the JUDGE taking his seat, he said: Who supports the charge against the high-bailiff?—Mr. BEER: I do.

The JUDGE: Who do you appear for, Mr. Beer? Who are the prosecutors? I see a certain number of affidavits handed to me, but who are the prosecutors?—Mr. BEER: I appear on behalf of Jonathan Pickering, Peter Davey, and others, adventurers in Wheal Concord Mine.

The JUDGE: That we have nothing to do with.—Mr. BEER: And on behalf of George Wells Snell, one of the parties making the affidavits.

The JUDGE: How is he interested?—Mr. BEER: As a general agent for all the adventurers.

The JUDGE: Then he is only their agent?—Mr. BEER: That is all.

The JUDGE: Having no personal interest?—Mr. BEER: None, Sir.

The JUDGE: He is an individual here on public grounds?—Mr. BEER: He is not a shareholder.

The JUDGE: I do not see, in his own character, he has any *locus standi.* He is one of the public—that is all.—Mr. BEER: He is one of the parties in the transaction; and he has a right to complain of certain parts of the transaction, conducted as it was by the bailiff.

The JUDGE: I understand, he appears here for other parties—only as their agent.—Mr. BEER: It can be as your Honour pleases to direct. At all events, I appear here for two individuals, who are aggrieved, and who complain under the Act of Parliament.

Mr. ROBINS: Then, Mr. Snell's name is to be struck out?

The JUDGE: I only ask in reference to the costs, because the matter might go farther. I, therefore, inquire who Mr. Beer appears for. You say, Mr. Beer, for Mr. Jonathan Pickering and Mr. Peter Davey?—Mr. BEER: Yes.—Mr. ROBINS: May I ask where they are to be found, sir?

The JUDGE: Where are they to be found? You say, Jonathan Pickering and Peter Davey.—Mr. BEER: Thames-place, Limehouse-wall, London.—Mr. ROBINS: What is the number?—Mr. BEER: That is the address which will find him.—Mr. SNELL: I always addressed my letters in that way, and they found him.—Mr. BEER: and 4, Sussex-place, Regent's-park, London. Mr. Snell is a solicitor, residing at Callington. This is rather a novel case; but, I presume, the proper course is to begin by reading the affidavits?

The JUDGE: For whom do you appear, Mr. Robins?—Mr. ROBINS: For the high-bailiff, your Honour, with your permission; and, before the case proceeds, I would ask your Honour to order all witnesses on either side out of court. [This was done.]

The JUDGE: Does any person appear for Walter Weekes, the defendant in the suit? [No one answered.] Walter Weekes; does he appear in person? [No answer.]

Mr. BEER: If your Honour pleases, I will now proceed to read the affidavits. I presume that is the proper course. I do not know whether your Honour has been furnished with copies.—The JUDGE: Yes; they are all before me.

Mr. BEER then read affidavits made by Edward Kendel, Walter Weekes, George Wells Snell, and John Weekes. These affidavits (said Mr. Beer) had been filed in court, in accordance with his Honour's directions, with a view of substantiating the charges made on a recent occasion against the high-bailiff, in reference to this transaction, which, it would be ascertained, were of a three-fold nature. First of all, the bailiff was charged with having seized goods of a partnership concern, in satisfaction of a judgment obtained against one of those partners individually. The next charge was, that he had sold this property after a proper tender of the amount for which the levy had been made, to him through the agent of the mine, before the sale; and, thirdly, he was charged with having proceeded most recklessly, in selling these materials at a price far below their value. It was quite unnecessary to trouble his Honour—

The JUDGE: You do not mean to say that there was any better offer for them—that he sold them for less than he could get, do you? I see some of those persons who make the affidavits were present, but they do not appear to have been bidders.

Mr. BEER: No. He apprehended, in the progress of this case, that it would be seen there were no *bidders.* In point of fact, it was not a *bonâ fide* sale; and this was, notwithstanding all the warning which the bailiff had received, and which ought to have led him to hesitate, before he proceeded to the sale. He, therefore, said that he had proceeded recklessly; and if he showed his Honour, that the only person who offered money for the engine was the purchaser of it, and that he had bid upon himself, and nobody else bid, it was enough to prove that the sale had been a reckless one; especially after the warning the bailiff had received. With regard to the first charge—that these goods were sold, being goods of a partnership concern, although the judgment was against a private individual, he apprehended the law was so clear, that it was scarcely necessary he should advert to it; at the same time, it might be necessary to say, there was cause of complaint upon that score, because the goods of a partnership concern were not liable to a separate debt, except to the extent of interest which each partner had in the partnership. With regard to that part of the case, his Honour would find, from the affidavit of Mr. Rendel, that he had served Mr. Brownson himself with the notice appended to the affidavit, and to which he drew the attention of his Honour on the last occasion. That notice was not so much a notice of claim of goods, as it was to give information to the bailiff, that the warrants in his possession were directed against Walter Weekes as an adventurer in Wheal Concord Mine, and that, inasmuch as he was not so, the bailiff was levying upon goods to which Walter Weekes, so assumed to be an adventurer, was not entitled.

The JUDGE: You will observe, that notice does not say Walter Weekes was not an adventurer at the time the judgment was received.

Mr. BEER: No; it said he was not an adventurer, and had not been so a considerable time previous. It would not become him to say, that these notices had not been loosely drawn, and so loosely given; but, at the same time, he apprehended they were a sufficient caution to induce the bailiff (if he had ordinary understanding, charged with warrants to levy to so large an amount), to seek some assistance, and not to have trusted to his own judgment in the matter. He complained, therefore, that notwithstanding he was seizing partnership goods, he advertised them; notwithstanding he had notice that, in point of fact, the man was not at that time a partner in the undertaking, he should have proceeded in the way that he did, because he ought to know that partnership goods were only liable to the extent already adverted to; and if he did not know that, after the notice that the man was not an adventurer in the mine (and he claimed in aid of that, that the warrant directed him to levy on the goods of Walter Weekes, as an adventurer in this mine), he ought to have referred, as a matter of prudence and caution, to the clerk of this court, or some other person, to see whether he was justified, after such notice, in going on with the sale of these materials.

The JUDGE: Would not the clerk have been justified in saying to him, if you want advice, go to your own attorney?

Mr. BEER: Probably so. Considering that this was a newly-constituted court, he admitted that the clerk might have declined to take upon him the responsibility; but he (Mr. B.) said, they would have been satisfied if the bailiff could show to them that he did make an inquiry of anybody; but, so far from this, he proceeded on his own judgment, not only to levy, but he proceeded to the sale; and, as the affidavit of Mr. Rendel showed, at the time the second caution was placarded on the mine. That would have been a very serious thing if it only applied to a very small judgment, and, if it had happened to a poor person, would have made a considerable stir. The fact of selling the partnership goods, was an act aggravated by the notice which had been given. No one shared the responsibility of the act with the bailiff—there was no answer that it was the act of his bailiff, and not his own, for the levy was made by him, and the notices—first, that Walter Weekes was not an adventurer in the mine; and, secondly, cautioning all parties not to go to the sale—were served on him. The second part of the charge was, probably, the most material, because of most consequence to all parties interested in this suit. It appeared that the agent, or, as was commonly called, the purser, attended on the mine, and, as he had a right to do, inquired for the bailiff in possession of the warrants. With reference to this, the section was very strict, and it was incumbent on Mr. Brownson, as the high-bailiff, before he put any one in possession, to caution him not to neglect complying with this portion of the statute, because, by the 109th section, it was expressly enacted, that any tender was to be made, either to the clerk of the court or the bailiff holding the warrant. The express words were—"And be it enacted, that in or upon every warrant of execution issued against the goods and chattels of any person whomsoever, the clerk of the court shall cause to be inserted, or indorsed, the sum of money and costs adjudged, with sums allowed by this Act as increased costs, for the execution of such warrant; and if the party against whom such execution shall be issued shall, before an actual sale of the goods and chattels, pay, or cause to be paid, or tendered, unto the clerk of the court out of which such warrant of execution has issued, or to the bailiff holding the warrant of execution, such sum of money and costs as aforesaid, or such part thereof as the person entitled thereto shall agree to accept in full of his debt or damages, and costs, together with the fees herein directed to be paid, the execution shall be superseded, and the goods and chattels of the said party shall be discharged and set at liberty." The affidavit of Mr. Snell stated, that he went to this mine, and found a man in possession. He asked, first of all, to be shown the warrants in his possession, and they were produced. That showed that he was the party, strictly speaking, to whom the tender was to be made.

The JUDGE: The Act says, it is to be made by "the party against whom the execution shall be issued."—Mr. BEER: But the principle, *qui facit per alium facit per se,* would apply here undoubtedly.

The JUDGE: You say that the person who tendered was the agent of Walter Weekes, as the purser of the mine, and that Walter Weekes was not a shareholder in the mine. How then can he be agent for Walter Weekes?—Mr. BEER: Two persons, Walter Weekes and John Weekes, were present at this time, and the bailiff might have presumed that the agent was authorised to make this tender.

The JUDGE: Would it be safe for the bailiff to risk any presumption? He is in a very responsible situation.—Mr. BEER: Unquestionably so; but, whatever might have been the fact, if the bailiff had obtained the money, the person tendering it would have had no right to complain of the money being improperly received, having paid it himself, though in his own wrong. He did not ask the court to say what the bailiff ought to presume, but what were the facts. Mr. Snell asked the man to inform him of the amount for which he was in possession of the steam-engine, and he (Mr. B.) apprehended it was his duty to know. At all events, he did not know. He said, "I do not know." "Do you think it is as much as 200*l.*?" "No; not so much." "Then, here are two Bank of England notes, each for 100*l.*; take them in satisfaction of the execution." There was no doubt, he submitted, upon the matter, as far as the Act of Parliament raised a doubt. The suggestion his Honour had thrown out did not then arise. The man never said to Mr. Snell, "Why, don't you know you told me Mr. Weekes was not an adventurer; how do you make the tender on behalf of Mr. Weekes?" But he said, "I refuse to accept it: take it to Tavistock." Did the Act require, that Mr. Snell, standing, as he did, as the known agent of the mine, should go to Tavistock? The Act directed that he should go to the clerk, or to the bailiff in possession—the man Warren. If the Act was to be construed so strictly, that a man's goods were to be sold, though he sent his servant to pay the money—if the clerk could say, "I do not know you; I cannot take your money; I have only to deal with the individual against whom the warrant was issued."—it was a construction which could never have been contemplated. It must naturally be inferred, upon the principle "that who does it by another, does it by himself," that the tender is good.

The JUDGE: It must go farther than that, although a man says I tender the money, he must do so as the agent of the defendant in the suit.

Mr. BEER: His Honour would hear *viva voce* evidence upon the matter—affidavits had been made by Walter Weekes and John Weekes, that the attention of the bailiff was drawn to the fact, that the notes were Bank of England notes, and not flash notes. The tender was made days before the sale—this was in Lamerton, a parish adjoining Tavistock. Mr. Brownson never made any mention of the circumstance, no matter whether the tender was right or wrong, whether the money had been perfectly tendered or not, whether they were Bank of England notes or not—on this he was perfectly silent, until he came to the sale on the 29th. There was a material circumstance connected with that disclosed in the affidavits, upon which great reliance might be placed as to the third charge. It appeared by the affidavit of Mr. Rendel, that some time before the period referred to, he had, by the direction of the proper parties, advertised that a sale would take place at the account-house on the mine on the 26th of July, of all those materials, and on the 26th of July he found Mr. Brownson the bailiff there; and he (Mr. B.) apprehended, in consequence of an execution being levied on the goods of the mine, there was an indisposition on the part of persons to purchase. The materials were, therefore, put up and sold to Mr. Little, the solicitor, who appeared on behalf of the adventurer, for 149*5l.*

Mr. ROBINS: That is very different from being knocked down.—Mr. BEER: No doubt, he was not misquoting the affidavits—Mr. Little attended at the mine, and finding no person inclined to bid, he, on behalf of the adventurers, bid, and it was knocked down to him for 149*5l.* The bailiff was aware of this, and could not, therefore, be said to be ignorant of the value of the materials, for they were valued by the parties themselves in 149*5l.* The bailiff had, therefore, no justification of the course he had adopted.

Mr. ROBINS: He was not present.—Mr. BEER: The affidavit of Mr. Rendel was conclusive—the sale took place on the 29th; and at the time the levy was made, there were sufficient moveable materials on the mine to satisfy the judgment without seizing on the engine, &c. That was not a matter left to Mr. Rendel's judgment merely; and it might be said, that if these things were disposed of at a forced sale, they might not realise their value; but a sale was afterwards held, and they realised 259*l.* 7*s.* 3*d.*, very nearly 100*l.* more than the amount for which the bailiff was in possession.

The JUDGE: But is not an answer contained in the fact, that only so much as is comprised in Mr. Walter Weekes share could be applied in liquidation of these demands? It is not what these things were sold to Mr. Little for. We are not told what is Mr. Walter Weekes share, and a very large sum obtained by the sale might not be more than sufficient to satisfy the judgment.—Mr. BEER: Very true, but they made it altogether a grave charge against the high-bailiff. It was asserted that all these things combined, showed some degree of malice towards the innocent adventurers; because, as stated on the last occasion, the engine was turned idle, and the bailiff might just as well (had he the power) have sold the land itself, as do what he did. The affidavits, to which he had referred, had been filed in support of the charge; and it would be for his Honour to determine the course of proceeding, whether the witnesses were to be heard *viva voce* upon the whole matter, or in cross examination upon the affidavits they had filed. Whichever was adopted he apprehended, if the charges were proved, but one course could be adopted. The bailiff of this court had very grave and important duties to perform—a vast quantity of money from time to time passed through his hands, and the power he possessed under this court was very considerable. It became him, therefore, so to carry out his duties, that not the slightest suspicion could arise, that he was actuated by improper motives—it was necessary that the bailiff should be a man of competent understanding, and competent judgment. He was sorry to say (and he would not have urged it without great reason), that the affidavits showed this was not the case. He thought the affidavits disclosed such a course of incompetency and misconduct, that no doubt his Honour would inflict some penalty on Mr. Brownson, and give the parties an opportunity of seeking a remedy at the hands of his bail; and he apprehended, if the facts were as stated in the affidavits, if the incompetency was shown which had caused so much injury—injury for which no remedy could be found in any penalty that could be inflicted—the only course which his Honour would take would be to dismiss Mr. Brownson from his office of bailiff of that court.

The JUDGE: The affidavits cannot be taken in support of the charge, but only as the ground work for proceeding, as they are in the Court of Queen's Bench.—Mr. ROBINS: I apprehend, Sir, there cannot be any witnesses examined besides those.

The JUDGE: Certainly, there can be no other charges made—I have now to hear the case in a summary way, and only on the charge preferred.

Mr. BEER then called and examined,

EDWARD RENDEL—sworn—stated, I am an auctioneer residing at Callington, Cornwall. In the month of July last I was employed to sell the engine and materials at Wheal Concord Mine, and advertised the sale to take place on the 26th of July. I attended the mine on that day, and found Mr. Warren, a bailiff, there. Mr. Little, a solicitor of Devonport, was on the mine. Mr. Brownson, the high-bailiff, was not there when I came first—Warren had possession of the engine-house, and would not allow us in—he had locked the door—Mr. Brownson arrived after the sale was over. I proceeded to hold the sale—Mr. Little bid, and nobody else.

The JUDGE: And would you call that, Mr. Beer, a fictitious sale?—WITNESS: Mr. Little bought the things in for 149*5l.*

The JUDGE: How do you know he bought them in?—He bid.

The JUDGE: And you knocked the lot down?—Yes.

The JUDGE: Was there nobody else who bid but Mr. Little?—Not that I recollect.

Examination resumed: I served a copy of the notice I hold in my hand on Mr. Brownson the same day, I said to him here is a notice to you to withdraw—he said he should take or get some further advice upon that—I sent a copy of the notice to Mr. Bridgeman. I asked Brownson if there was any occasion for my reading the notice to him, and he said no. I issued an advertisement for a second sale of materials, to be held on the 12th of August, it was postponed to the 19th, when the sale was held—the engine had been sold previous to that sale. I sold what remained on the 19th of August: they consisted of a water-wheel, and other materials, and made 35*9l.* 7*s.* 3*d.*—all these things were on the mine on the 26th.—Cross examined: The notice was signed George Wells Snell. Examined the notice before serving it.

The JUDGE: Where did you find the word "withdraw" in the notice?—That is what I said to him.

The JUDGE: Yes, so you have said, but did you see the word in the notice?—No.

The JUDGE: It was not a notice to withdraw, and why did you mislead him?—I said to him what I have just said.

Cross-examination continued: Mr. Little is an attorney of Devonport, and is of the firm of Little and Woolcombe—knocked down to him all that was advertised. Mr. Little is a gentleman of responsibility, and respectability, I believe—do not know him, never saw him before, would have no objection to another such a customer; there were not many persons, there might have been 20. A great many questions were then put to this witness with a view of ascertaining what proportion of the materials, which realised 259*l.* 7*s.* 3*d.*, was underground, but he declared he had not minutely gone into the list; when Mr. Little purchased the materials, witness's commission was 3*l.* 3*s.*—Re-examined: Thought the engine was worth about 800*l.*, that was his judgment—had 3*l.* 3*s.* for conducting the first sale—put it down as being bought in for the adventurers—received the 3*l.* 3*s.* out of the sale held afterwards.

The JUDGE: You treated yourself as selling for the same parties?—Yes, Sir.

GEORGE WELLS SNELL examined: I am a solicitor of Callington, and have acted as purser and agent for the adventurers in Wheal Concord Mine.

The JUDGE: Did you act under any power of attorney?—No; my name is in the original cost-book, with the resolution.

By Mr. BEER: Mr Jonathan Pickering, and Mr. Peter Davey, are adventurers in the mine. Mr. Walter Weekes was an adventurer in the mine, now he is not: the notice produced is signed by me; directed a copy of that to be served on Mr. Brownson—it was drawn up by my brother, and signed by me.

The JUDGE: Was it drawn up under your direction?—I was not at home at the time.

The JUDGE: You might have sent about it; did you give any direction to your brother to do it?—I did not.

By Mr. BEER: Mr. Little attended a sale of the materials as solicitor for Messrs. Gill and Rundle; heard that they were knocked down to him for the adventurers for 149*5l.* Mr. Little was attending for the creditors, but it was arranged he should bid for the adventurers; it included everything, sett and all. On the 27th of July, went to the mine, and saw the bailiff in possession; heard he was called Warren, inquired for him, found him in the engine-house; inquired for the bailiff in possession, he said he was in possession; I then asked him to allow me to see the warrants, and he took from his pocket a roll of warrants; looked at several, did not go over them, saw one relating to Oats's case—that warrant was directed against Walter Weekes, as an adventurer in the mine—it was similar to the one produced.

The CLERK: There has only one gone out of the office.

WITNESS: I then asked the bailiff the amount for which he was in possession; he said he could not tell. He had previously asked me under what authority I came. I said, as purser of the mine, to settle the matter, if we could arrange. He then gave me the warrants. The words I used were, "What is the amount for which you are in possession—levy, and costs?" or words much to that effect. He said, "I can't exactly tell." I said, "You can tell pretty close, I should think—is it 170*l.*?" He said again, "I can't exactly tell." I said, "Is it 200*l.*?" He said, "Not so much as that." I then took from my pocket two Bank of England notes, each for 100*l.*, and tendered them to him. I said to him, "If you can't tell exactly the amount, I tender you 200*l.* I can't wait for the difference; you can settle it at any time." He then said he was not authorised to settle—"You must go to Tavistock, and settle it." I then said I should not go to Tavistock, I had not time; I had tendered to him the money. It was in the midst of the Liskeard election, and I had started from Liskeard to see him. Walter Weekes and his son, John Weekes, were present. He did not make any objection to the money. I said to him, "Be sure, and see they are not flash notes."

The JUDGE: What could induce you to say so? I never gave a bank note to a man in my life, and said, see it is not a flash note.—WITNESS: I will tell you my reason. The man appeared to me so ignorant as not to know what he was doing, and not at all fitted for the capacity he was filling; and when I tendered the notes, I said to him, therefore, "see that they are not flash ones." There was an engine sold under the warrant, which was here on the 27th. I saw it when in course of erection. It was worth more than 170*l.* It cost more than 1060*l.*, with the pit-work. I was then in treaty with a party for the purchase of the engine for 1200*l.*—the engine, capstan-ropes, and all the pit-work—all the materials, except the sett.

The JUDGE: Except the sett: the sett is not materials.

WITNESS: No; I had received the offer, and was in correspondence with the committee. There was an account for 259*l.* cash returned to me. I apprehend that at the time of the levy, there were all the materials on the mine which fetched that amount.—Cross-examined: The cost-book was signed the 21st of January, 1845; and I have been purser of the mine down to the present time. An purser at this moment. From April, down to July, there were labourers and workmen employed on the mine. The men have not been paid, I believe, from April down to July last. The men ceased to work when the engine was seized by the bailiff. It was some time in July; can't tell the exact day. The men, except those necessary to keep the shaft in course, may have stopped work before the seizure. Have received no account for July; and, therefore, take it for granted the men had stopped before the seizure, as far as sinking and driving are concerned.

The JUDGE: Well, the mine was stopped I suppose? The adventurers can't get any profit for returning water, can they?—WITNESS: I presume not. There is no cost entered in the book since June. None had been rendered by the captain. It was more than probable that I read the notice served on Mr. Brownson. It was sent to me in the midst of the election.

Mr. ROBINS: You, being an educated man, can tell whether you would have sent such a notice as this. If I had drawn it, I should have said, "I, George Wells Snell, having levied—"—WITNESS: I don't ask you how you would do it, Mr. Robins.—Mr. BEER: It is the very contrary to what you would put.—The JUDGE: That is the genuine grammatical construction.—Mr. BEER: It may be in one sense.—Cross-examination continued: Think it probable I should have signed it, if I had read it; because there was no time to have a fresh notice drawn. The notice, marked A, was drawn by me in my office, I think, the same day on which it bears date. The copy produced appears to be addressed to Mr. Robins. The post mark is the 30th. The sale took place on the 29th. Did not ask Warren his name. Took it as granted he was the bailiff of the court in possession, and I found he had the warrants.

The JUDGE: Probably, you did not know the bailiff had power to appoint deputies?—Yes, I was perfectly aware.—The JUDGE: Then, what do you mean by saying you knew he was the bailiff of this Court?—I knew he was in possession, either by himself or his officers.—And yet you did not inquire which of them?—Mr. Weekes had heard his name was Warren.

Cross-examination continued: I went in the mine on Tuesday, the 27th; demanded the warrants of the man in possession. Signed the notice, marked C, before the 27th of July. Did not say to Warren that Weekes was no adventurer, though I said so, I think, in his hearing; but outside. He did not come outside. He had had notice before.

By the JUDGE: Gave the notice as purser on the part of Jonathan Pickering and Peter Davey, and the adventurers generally; but, before that, Walter Weekes was not one of them.

By Mr. ROBINS: I think I had the warrants in my own hand, and looked at them at the window. Walter Weekes and John Weekes were both present.—Mr. ROBINS: You say you made a tender; what is your opinion of a tender?—I am not bound to come here to give you my opinions.—You say you tendered 200*l.*; now, I want to know, what you mean by that, offering the men the money?—I took the notes out of my pocket-book. Made no memorandum of the circumstance then nor since. Have made one or two tenders before. Have made a tender in sovereigns.—Did you ever say, look at them, and see they are not spurious? The JUDGE: Or weigh them, and see that they are full weight?

—Witness: No; nor should I have said what I did to the man, except from his excessive ignorance.—The Judge: Yet you said so then?—Yes; but I think, when you examine other witnesses, you will find that the word "flash" came from another first.—Mr. Robins: Did you not say you came there as an agent for Mr. Weekes?—No.—Did you say that Mr. Weekes was not an adventurer?—No.—Nor a co-partner?—He would not have understood it.—Did you offer the 200*l.* under protest?—I did not protest.

The Judge: I don't see, Mr. Beer, how you can get over that. Here is a man disclaiming any authority, in reference to Mr. Weekes; and yet he says this must be taken as a tender in payment, on account of Mr. Weekes.—Mr. Beer: He says it was a tender in satisfaction of the levy and costs.

The Judge: I don't see how that can be. You disclaimed any authority from Mr. Weekes, and had before given notice that he was no adventurer; then, how can you treat him as tendering for Mr. Weekes?—Mr. Beer: The money was on the part of the adventurers.—The Judge: Then, instead of doing what he did, he should have claimed; he should not have said Mr. Weekes was not an adventurer.—Mr. Beer: I will ask one question here, if you will allow me. Suppose he had taken the money, was it your intention to have left it with him, or not?—Certainly.—In discharge of the execution and costs?—Yes.

By Mr. Robins: Left almost immediately after the man refused the money. It was about five o'clock when I tendered the money. I afterwards went to Mr. Weekes's house in South Sydenham, about a quarter of a mile from the mine. The engine-house is about three miles from Tavistock, a tolerably good road, turnpike most of the way. Received the offer of 1200*l.* from a party in London.—Did not Warren tell you he would send for Mr. Brownson?—He said I had better go to Tavistock; or he would send for Mr. Brownson.—The Judge: You left that out just now.—Witness: He said Mr. Brownson, or his master.—Mr. Robins: His master meant Mr. Brownson, did it not?—I suppose so. Had offered some of the men to sue some shareholders who had not paid their calls, if they would authorise me. Knew nothing about the form of retainer produced; it is in the handwriting of my brother. Might have employed that form, if I had drawn out any. Never offered some of the men 15*s.* in the 1*l.* for their debts. Never offered to compromise.—Re-examined: After the tender was made, went to Mr. Weekes's house. Mr. Walter Weekes referred to is the younger gentleman; the elder gentleman lives at Lamerton. If the bailiff had accepted the 200*l.*, should have left it entirely at his own disposal to clear the execution. It was necessary to keep the engine in work, though the sinking and driving had ceased. The pumps would have been knocked to pieces else.—The Judge: What was the share Mr. Walter Weekes had in the mine? 16-1024ths. That is, 1-64th of the whole?—Yes.

Walter Weekes sworn: I was present at Wheal Concord Mine on the 27th July. Went with Mr. Snell; but did not know for what purpose he went until then. Saw the bailiff in possession.—[Witness then deposed to the tender of the two Bank of England notes, each of 100*l.*; he saw they were genuine.]—Was in the mine on the 19th of August; saw several things sold. The things sold by Mr. Rendel on the 19th August, were on the mine the 27th of July. The underground materials fetched 20*l.* 5*s.* out of 259*l.* 7*s.* 3*d.* Mr. Peter Cerutty was the auctioneer. The first thing put up was the engine. Mr. Nicholls, of the Bedford Foundry, put it up.—The Judge: You mean he had the first bid?—Yes, Sir.—Mr. Beer: What was it?—I think 100*l.*; but am not positive about it. Nobody bid upon him; he bid upon himself twice, and went from 100*l.* to 120*l.* Did not see the capstan rope sold.—Cross-examined: Saw Snell take the notes out of his pocket-book. As soon as Warren would not take them, he turned round and showed them to me. The sett was granted by me to George Wells Snell. The deed was executed about January, 1845. At the last sale, there were some gunpowder, candles, &c., sold. Do not know whether Brownson was in possession of the blacksmith's shop on the 24th of July. Mr. Cerutty, the auctioneer, requested gentlemen to bid.—The Judge: He did his duty as an auctioneer, and had to get the best bids he could for what he was selling, I suppose?—Yes.—Was there any obstacle thrown in the way of getting the best price for what was offered for sale?—Not that I am aware of.—Did you see any of these papers cautioning people not to buy at the sale, and signed "G. W. Snell?"—Yes.—Did you bid?—No.—Neither for your father nor yourself?—No.—You know how interested your father was in the matter, and yet you said nothing when the tender was made and declined?—I said nothing of any import.—You did not urge him to take the money?—No.

The Judge: It was this caution, Mr. Beer, which was stuck up that was enough to deter erpeople from buying.

Mr. Beer: The object was to prevent the sale altogether.

The Judge: To be sure; and because you failed in that, you retort on the bailiff.

Mr. Beer: We say we gave the bailiff notice that the materials were not the property of the defendant in the suit, and then we gave the other notice. It is the conduct of the bailiff we complain of, not of the operation of the statute.

The Judge: Well, go on.

Mr. Beer: One cannot help seeing by whom the solicitor is instructed at this moment—namely: the party who is possessed of this valuable engine. Besides, there is something more.

John Weekes sworn: Also deposed to the tender.

Thomas Weekes sworn: Stated that he had seen an advertisement of the sale held by Brownson, at the foot of which it was stated, that application was to be made to Mr. Brownson, or to Mr. Robins, plaintiff's solicitor. It said that the sale was to take place on the 29th July; but no hour whatever was named.—Cross-examined: The bill now put into my hand has two o'clock on it. Saw no bill with the hour on it. Would not undertake to swear that bills, with the hour of the sale, had not been circulated. Did not hear Cerutty beg parties to settle the matter. Can't give an opinion as to whether the sale was fairly conducted. Am more than 21 years of age. Was never at a distress sale before.

The Judge: This was not a distress sale?

Mr. Beer: They call it so, your Honour.

The Judge: Was there any body prevented from bidding?—No; but we did not think it fair to sell, and did not think fit to bid.—The Judge: You might have done so, and paid all these poor men, who have been kept out of their money so long.

Mr. Beer: That is all—that is the case.

The Judge: Then I have to say, I have listened very attentively to all that has taken place, and I am sure noboby can say I have not; I came over here on purpose. I have endeavoured fully to investigate the circumstances, and have paid every possible attention to everything alleged, to establish the charge of misconduct against the high bailiff; and without calling on him for an answer, it does not seem to me that that misconduct has been proved; but I do think there has been gross mismanagement in this case. I think the only part that reflects credit is this—that, in the open hearing of the original suit, the defendant, with honesty and good feeling, admitted that he was an adventurer—that he was liable—and that the only question was, what was the amount of the judgment which ought to be given? That, I think, was fair, honest, and manly conduct. I thought I never should have heard more of this case; and, when I found this litigation, I was perfectly surprised. I saw there must be somebody behind the scenes—somebody keeping this going—not with any good motive whatever. I cannot see anything established which reflects upon the conduct of the high bailiff. Whom has he injured? The names of Jonathan Pickering and Peter Davey? They were not known—they are persons whose residences have been disclosed to this court to-day—and yet these persons come forward to say, it is from malicious motives to them that these things have been done. If parties had acted with ordinary caution and judgment throughout this matter, the waste of this valuable engine would not have ensued; and there would have been no reason why these poor people, who have been working on the mine, and from whose labour profits have been made by the adventurers, should not have been paid their money. There has evidently been an unwillingness to do that; and now it is attempted to put that upon the bailiff. I think no case whatever has been made out against him. I am bound to think he committed an error in judgment; but I think it arose rather from a good feeling than otherwise. He found the warrants directed against the defendant as an adventurer in the mine, and he took the partnership instead of his private property; that he might have done; and, perhaps, it was unfortunate he did not. It was clear he did go to the partnership property, because it was only as a partner he was sued; and the partnership, he thought, ought to bear him harmless. He took the property; but only so much as the defendant's share can be applied. Even the sum for which it was knocked down to Mr. Little, would not suffice; for the proportion of the defendant's interest appears only 1-64th—therefore, what has been sold will be very very far indeed from satisfying the judgment. Mr. Weekes, ill-used as he has been, will still remain reponsible for the balance after this small sum has been paid into Court, and taken to satisfy these demands. I think Mr. Weekes ill-used by those with whom he has been concerned; but I cannot think the bailiff has acted improperly. Injudicious he might have been, and of an error in judgment he has been guilty; but it is one that has arisen from a good motive—namely: that, if these warrants were issued against him as a partner, the partnership generally ought to be responsible.—That, however, is only an error, and does not show malice; and I think the charge, under the 116th section, is not proved. I discharge him from all the consequences, and consider him entitled to receive the costs of this hearing.—3*l.* 12*s.* 2*d.* were then awarded as plaintiff's costs.

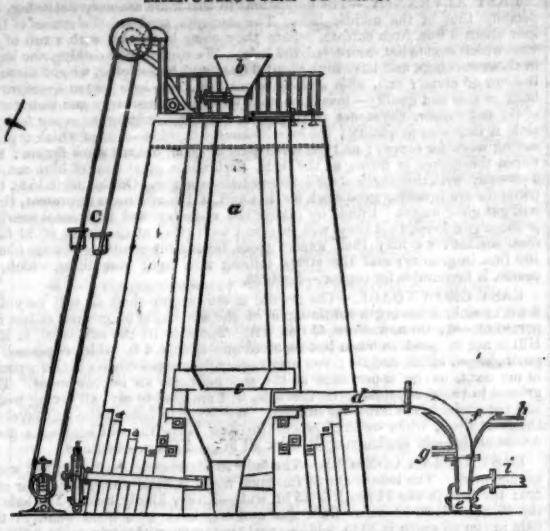
In re John Ryan—Organic Substances—Insolvent Debtors' Court.—This insolvent was a scientific gentleman, and had been engaged at the Polytechnic Institution as a chemical lecturer. Dr. Ryan was the inventor of a new method of preserving organic substances, and was the author of several other inventions, for which he held patents. The office of director of the Universal Gas Company has been filled by him, and he was now in arrear with the world to the extent of 4036*l.* The opposing creditor was a Mr. Murphy, a distiller, residing at Cork; and his objection to the immediate discharge of the insolvent was, that he had contracted a debt under false representations. A great deal of evidence was adduced, from which it appeared that the insolvent had made application to Mr. Murphy for the loan of 100*l.*, which was granted on the understanding that it was to be applied to the purpose of taking out a patent for the preservation of organic substances. It was complained that the money was applied to other purposes; but Mr. Ryan explained that his invention was not sufficiently complete for a patent at the time he borrowed the money, so that he was compelled to expend it in making experiments; and the learned commissioner, considering no case for a remand had been made out, ordered the insolvent to be discharged forthwith.

Express Trains between London, Liverpool, and Manchester.—The express trains from London to Liverpool, *viâ* the Trent Valley line, will perform the distance—200 miles—in five hours, or at the rate of 40 miles per hour.

James Muspratt and Son's Chemical Works, Newton-le-Willows.—We understand, from very good authority, that the proprietors of these immense works have expended, within the last eight months, nearly 7000*l.* upon condensing apparatus, with the view of allaying any further prosecutions from the gentry residing in their neighbourhood. The plan for condensation has been most successfully carried out, and this is proved by the fact, that the vapour which now issues from the orifice of the monster chimney entirely disappears at the distance of 150 yards. If there were any muriatic or sulphurous acid gas mixed with the aqueous particles and coal smoke expelled from the works, it would be visible for two or three miles. We hear that many of the residents at Newton have already remarked the great improvement that has recently taken place in the vitriol works. If so, we hope that they will in future be lenient on a manufacture which has directly and indirectly increased the revenue of this country 4,000,000*l.* to 5,000,000*l.* annually, and which daily affords employment to thousands of people. What will science not accomplish when aided by ingenuity and capital?—*Gore's Liverpool Advertiser.*

Four Wounds and Erysipelas in the Leg Cured by Holloway's Ointment and Pills.—James Garrell, ostler, of Lineskea, Ireland, hurt his leg six years ago, and shortly afterwards four wounds broke out, which kept continually discharging. Frequently he suffered so much as to be quite unable to follow his daily labour, and, lastly, erysipelas settled in his leg for nearly two months. During the time of his suffering several medical men attended him, but every application failed to give him relief, until he used Holloway's ointment and pills. These fine medicines soon effected a perfect cure, and he can now walk with the greatest comfort. Sold by all venders of medicine throughout the civilized world; and at Professor Holloway's establishment, 244, Strand, London.

## MANUFACTURE OF ZINC.



[Specification of patent granted to Mr. D. T. Shears, of Bankside, Southwark, for "improvements in the treatment of zinc ores for the purpose of producing zinc ingots, which improvements are applicable to the reduction of other ores and metals."—Dated Jan. 19; enrolled July 19.]—*Civil Engineer's Journal.*

The invention relates to making zinc from ores in combination with the making of gas for the purposes of light and heat by using a blast high furnace and anthracite, coke, charcoal, or other suitable fuel, and other metals may be made at the same time.

The figure represents a section of the furnace and apparatus. The furnace, *a*, is charged through a funnel, *b*, at the upper part, there being slides to prevent the passage off of the gas which may be at the upper part of the furnace, the lower slide being closed when the upper one is opened at the time of introducing a charge; the upper slide being closed when the lower slide is drawn out to allow the materials to descend into the furnace. The materials for charging the furnace are raised by an endless chain, C. If iron be contained in any of the ores or materials to be used (and such is found sometimes to be the case), then the lower part of the furnace is to be made suitable for tapping off the iron, from time to time, in precisely the same manner as iron furnaces have heretofore been constructed. No claim is made for the construction of such furnaces, but only the mode of making zinc therein. At the upper part of the boshes, *c*, the furnace is contracted under which the gas and the vapours of zinc accumulate and pass off through the pipe, *d*, into the receiver, *e*. The pipe, *d*, passes through the vessel, *f*, which has a flow of water constantly through it, passing into it by a pipe, *g*, at the lower part, and off at the pipe, *h*, at the upper part. Or oil may be used in place of water, in which case, as long as the oil is kept below its boiling point, it will indicate that the gases are not carrying off zinc vapours, and the receiver is kept sufficiently heated to prevent the zinc solidifying, which it is preferred to do by a gas burner supplied with gas from the apparatus, and there is a tap-hole at the lower part of the receiver to draw off the zinc. The gas passes from the receiver through a pipe, *i*, in order to convey the gas to be burned for any desired purpose, whether for light or heat, and it may be used for roasting the ores, before they are used, by placing the same in suitable ovens or retorts, and heating such retorts with the gas. This furnace is similar to that described by Mr. Constable, in his patent for making gases from anthracite, and other fuel, in blast or high furnaces, and would, if no ores or matters capable of yielding zinc be introduced with the fuel, simply produce gas; but by introducing roasted zinc ores with the fuel from time to time, zinc will be made and be received into the receiver, thus beneficially employing the heat of the furnace. The quantity of ore introduced into the furnace may be varied according as it is desired to make a large or a smaller quantity of zinc. Any quantity, up to one part by weight of roasted ore to three parts of the fuel employed, is recommended. Iron, or other ore, may be introduced and treated with the zinc ore.

## IMPROVEMENTS IN GLASS CHIMNEYS, FOR GAS-LIGHTS, LAMPS, &c.

Achromatized Light.—The unpleasant and, to many sights, painful effects of the naked flame of a candle, lamp, or gas-burner, have long been known and felt, as also that they are not by any means lessened by passing through colourless glass; and numerous experiments, and much research, have been followed up by scientific men, with the view of discovering means of improving the colour of artificial light generally. The cause of the yellow glare perceptible during the combustion of all the hydro-carbons, is owing to the radiation of a superabundance of the red and yellow rays of the spectrum, and it is owing to the effect of these on the retina, that certain colours cannot be distinguished from others, when seen by artificial light. The principle has long been known to opticians, and in 1790, Dollond, of St. Paul's Churchyard, after many years of study and experiment, introduced the achromatic lens for telescopes, by which the iridescent halo, which obstructs and pains the sight in common glasses, is removed or prevented, and the object is seen through a perfectly clear and colourless fluid-like medium. Mr. McNiell, of St. Martin's-lane, has introduced a glass chimney, which does for common artificial light what Dollond effected for the telescope. He has patented a glass chimney, coloured, in its melted state, with a natural or slightly blue tint, which, when in use, obstructs the passage of the red and yellow rays, and leaves the flame of a mellow wax-like white, so imitative of daylight, that the various colours of the most delicate hues, such as ribands, silks, shawls, &c., can be most perfectly distinguished; and we understand, that more than one of our most eminent artists, who had entirely discontinued painting by gas or lamp-light, have, on obtaining the achromatic chimneys and globes, again taken to it; as they are as able to distinguish the most delicate contrast of colour as by day-light. Achromatized light is, from its extreme purity, perfectly unirritating to the eye—a sensation of coolness and relief being produced, in place of the pain and fatigue caused by the hot glare of uncorrected light. The quality which it possesses, of enabling the eye to indicate with distinctness the smallest characters of type or manuscript, renders it unrivalled for purposes of study, reading, long-continued exercise of the pen, as in public and private offices, banks, counting-houses, clubs, literary institutions, &c.; in short, under all circumstances, and in all situations, a universal means of improved illumination.

German Railways.—A letter from Mannheim says:—"The construction of our railway, in a direction for Constance, seems at hand; and, according to rumour, it will neither pass over the Schwarzwald, nor from Freiburg through the Höllenthal, but from Lorrach along the Rhine. We have already, for the purposes of the railway, 100,000 centners of rails at the Rhenish Prussian works, and 30,000 centners are expected here this autumn. Before the commencement of the earthwork, it was resolved to lay up the stock of rails necessary for the line, as experience has taught us how often the lines are prejudiced by the rails not being delivered by the time required." The traffic on the Main and Neckar Railway has exceeded all expectation, and greatly benefitted Heidelberg. Goods from Switzerland and the Schwarzwald of Baden, which formerly went by Manheim, now go from Heidelberg direct to Frankfort.

## IMPROVEMENTS IN LOCOMOTIVE AND OTHER TUBULAR BOILERS.

*Messrs. Fossick, Hackworth, and Elliott's Patent, dated March 3, 1847.—Specification Enrolled August 3, 1847.*

Fig. 2.

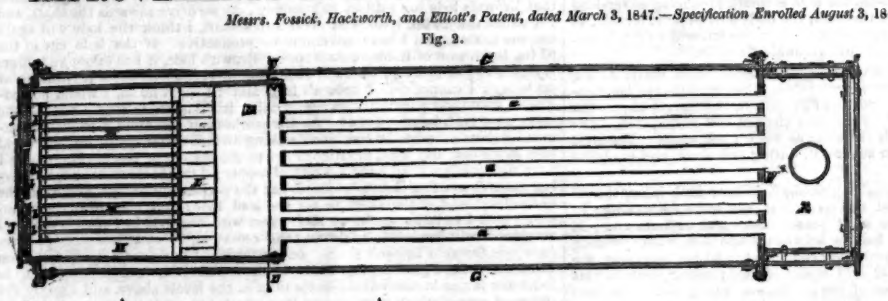


Fig. 6.

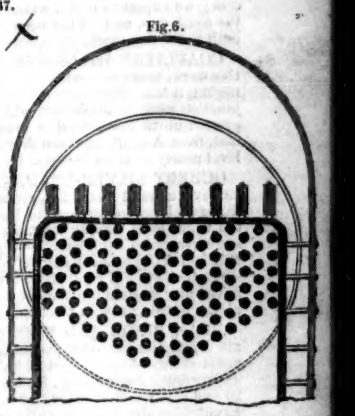


Fig. 1.

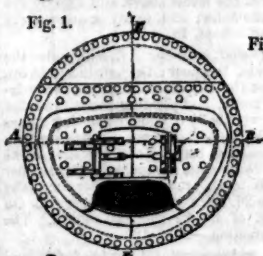


Fig. 3

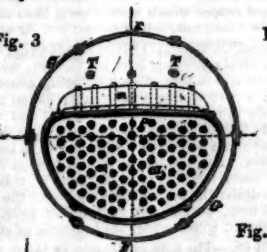


Fig. 5.

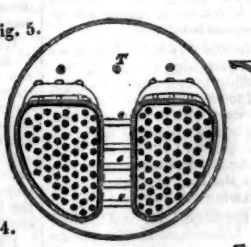


Fig. 7.

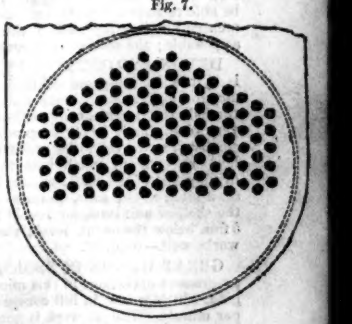
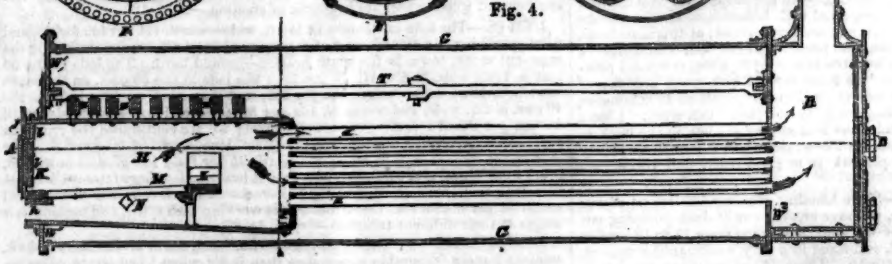


Fig. 4.



The accompanying engravings (figs. 1, 2, 3, 4) represent a locomotive boiler, constructed according to the improvements which form the subject of the present patent. The advantages attending these improvements will be found stated in the course of the description; and are such as will command—if not instant assent—at least universal attention. Mr. Hackworth, one of the patentees, is, if we mistake not, the same Mr. Hackworth who figured in the lists at the famous prize competition, on the opening of the Liverpool and Manchester Railway; and if so, he brings to his present task a more than ordinary share of practical experience in the department of engine work, to which the following specification relates:—

DESCRIPTION

Fig. 1 is a front elevation of the boiler; fig. 2, a sectional plan on the line A B; fig. 3, a transverse section on the line C D of fig. 2; and fig. 4 a vertical longitudinal section on the line E F. G is the external shell of the boiler; $W^1$ the front plate, and $W^2$ the back plate (exclusive of the smoke-box); H is the fire-tube, or box, which is made of a semicircular form, with the exception only that it is slightly convex at the top, as shown. It may be made either of copper or iron plates, and rivetted either with copper or iron rivets, and the plates may be of any length, width, or thickness, judged best. J J is the front plate of the fire-box; K the doorway. Both the front plate and the doorway are lined with double plates (*l l*), in order to protect them from the fire. L is the fire-bridge. M M are the fire-bars, which rest at the near end on a slab-plate *h h*, and at the far end on a ledge projecting from the bottom of the bridge. N (fig. 4), is a transverse bearing on which the fire-bars rest at the middle of their length. The furnace is rivetted at top to a series of transverse iron stays, *m m*, which are made of wrought-iron, and may vary in number according to the degree of pressure to which the boiler is intended to be subjected. P is a thick plate, at the inner or far end of the fire-box, and of the same nearly semi-cylindrical form, which has a flange turned out of itself all round, by means of which it is rivetted to the other furnaces-plates (flange inside). In this plate are a number of holes, in which are inserted the near ends of the fire tubes, *a a*, which pass through the body of the boiler, and are inserted at their other extremities in the back plate $W^2$. R is the smoke-box; S the chimney. The whole of the fire-box is made steam-tight, and the space all round between it and the external shell, G, is filled with water, and communicates with the other water spaces of the boiler. T T are a series of wrought-iron stays which are passed lengthways from the front-plate to the back plate of the boiler, and are coupled in the middle, as shown in fig. 4. The fire-tubes, *a a*, are arranged in vertical rows, so as to leave a free passage from bottom to top between the rows. And, as these rows, in consequence of the semi-circular form of the fire-box, are necessarily of varying lengths, they are so placed in respect of one another that every tube shall have an open water space on both sides of it. By this arrangement of the tubes, the water, as it is heated, is enabled to ascend more freely between the tubes than in a boiler, with tubes arranged in the ordinary zig-zag manner; while, at the same time, any solid matters which may may be separated in the course of the conversion of water into steam, have a freer descent to the bottom of the boiler. When, again, it is required to cleanse the boiler, this is readily effected by passing straight rods down between the straight rows of tubes to the bottom of the boiler, and stirring up the deposits which are then carried off by washing. These rods may have short radial flexible scrapers, of whalebone, cane, or other suitable material, attached to them, in order to cleanse also the tubes in passing; but in boilers with the tubes arranged in the order herein directed, the deposit in the tubes is so small as not for a long time to affect materially their heating power—whereas, in boilers, with the tubes arranged in the ordinary zig-zag manner, the tubes become very rapidly incrusted, lose as rapidly their heating power, and soon cease to be of any use.

Where boilers of very large dimensions are required, a modification of the arrangement just described, such as is represented in fig. 5 of the drawings annexed, may be adopted. This modification consists simply in parting the fire-box and tubes down the middle into two distinct sections, and in employing two furnaces, one to each section. The sections are placed at such a distance from one another as to leave a water space between them, and they are connected together sideways by strong stays, *o, o, o*. Each section is constructed in all other respects in the same way as the single fire-box and tubes hereinbefore described. Should it be desirable to adapt the tubular arrangement before described to locomotive boilers of the ordinary rectangular description, this may be done in the manner exemplified in fig. 6 and fig. 7—the former being a sectional elevation according to our plan; the fire-box end of a boiler, with the tubes adjusted at the smoke-box end, and the latter, a sectional elevation of the same at the smoke-box end. Boilers, with the improvements hereinbefore described—all or any of them—may be applied either to locomotive or to marine or to stationary, boilers.—From the *Mechanics' Magazine.*

# Mining Correspondence.

## ENGLISH MINES.

BARRISTOWN.—In the shaft, on the Slob, we have completed sinking 3 fms.; in it we have a lode about 4 or 5 ft. wide, mixed with white iron and lead of the purest quality; it should be the back of the middle lode from its perpendicular course. In the 18 fm. level end west we have turned the men to drive south, to expedite the sinking of Slob's shaft to the 18 fm. level; the air is so bad in this level, that the men, with the assistance of a powerful air bellows, are scarcely able to work; the lode in this end, for the last few fathoms, has been rather irregular. I consider the main part is above the end, which will be found by the shaft coming down; the winze, sinking in the bottom of the 18 fm. level, behind this end, is now down about 3 fms., and the lode is rather improving—it is from 2 to 4 inches solid branch of lead, standing perpendicular; and another branch about 4 in. wide, mixed with spar, worth about 8*l.* to 10*l.* per fm.; the ground about it is very hard; this is different from the lode eastward; in the rise over this the lode is also perpendicular, and worth about the same per fathom; in the 18 fm. level end, east of flat-rod shaft, we have a lode very flat, about 2 to 3 ft. wide, composed of white iron and lead, worth from 6*l.* to 8*l.* per fm. The 12 fm. level end west is at present not on the lode—we are driving north to discover it; in the middle lode, in the bottom of this level, the stopes east and west are worth from 8*l.* to 10*l.* per fm. We are clearing the bottom of the 18 fm. level, on the bottom part of main lode, worked on about 12 months since; the lode, in going west, is split, and the part taken down. We were not then able to follow it—our operations have been altogether on the upper part of the lode; this is about 40 fms. behind the west end. We have discovered nothing further in the adit end. We hope to ship a cargo of 40 tons about the latter part of this month.—Sept. 18.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump-winze is 2½ ft. wide, and worth from 90*l.* to 100*l.* per fm. In the bottom level east, the lode is worth 60*l.* per fm.; in this level west, the lode is 3 ft. wide, and worth 40*l.* per fm.; the north lode is still worth 12*l.* per fm. The lode in the 80 fm. level east is 3 ft. wide—good work; there is no alteration in the western winze in this level. In the 70 fm. level, the lode is 2½ feet wide, and worth 12*l.* per fm. At Liscombe, the lode in the adit level, and rise in this level, is still producing good stones of ore. The 25 fm. level, east of the south engine-shaft, is still composed of gossan, spar, and ore. There has been no lode taken down in the adit level east since our last report.—September 21.

CALLINGTON.—Kelly Bray engine-shaft being down 30 fms. from the surface, we have commenced cutting plat, and expect the lode will be cut in about a week; sinking below the 25, no alteration has taken place; in the stopes, the lode is from 3 to 4 ft. wide, orey throughout. The 70 fm. level, on this lode, is not yet in settled ground, numerous small branches intersecting it at present; it is 4 ft. wide, producing good stones of ores; from present appearances, the back will pay for working at 5*s.* in the *l.* The 50 fm. level is within a few fathoms of the cross-course; the lode is spotted with copper ores. In the 40 fm. level south, to the east of the cross-course, we have a small branch of silver-lead ores; calculating on the underlie of the lode, as seen in the 70, we expect to cut it very shortly, and have no doubt, after the different levels in this direction are properly ventilated, of making profitable returns of silver-lead ores from the great cross-course. The 100 fm. level, north from the north engine-shaft, continues in a most congenial channel of ground for the production of silver-lead ores; the lode at this time is not rich; the back will pay for working, at a moderate tribute; in the south end a little improvement is taking place, the ground being a little softer—the lode, also, looking better. The 90 fm. level north; is poor in the south end, the lode is 10 in. wide, coarse of quality. The 70 fm. level north is opening ground, that will work in a high tribute. The 40 fm. level north, on the lead lode, being unproductive, the same has been suspended; the men are now engaged driving west on the north lode; we have discovered, dipping to the north, and running between the clay slate to the north end, a channel of elvans; to the south, some stones of copper ores have been broken here. At the south mine, no lode has been taken down in the 125 south, neither in the rise in the back of this level; this we expect to hole, in the course of a few days, opening a good piece of tribute ground. In the rise, in the back of the 112 north, the lode is small, producing silver-lead ores; we expect to hole a winze to this part, the early part of next month; in the south end, no lode has been taken down. The 100 fm. and 90 fm. levels, both north and south, are opening tribute ground.—Sept. 20.

COATLITHE HILLS.—The vein has slightly altered for the better during this week, being now wider and more regular than it has been for the last fortnight; it has taken a turn to the north, of about 1 ft. in a fm.; I expect the junction with the other vein will be cut sooner than at first anticipated. The ground in the horse level is much the same as when I last wrote. The level east, from A shaft, has been driven about 4 ft. during this week, and the horse level nearly a fathom.—Sept. 18.

CUBERT SILVER-LEAD.—The engine-shaft is now sunk below the 35 fm. level about 4 fms. 3 ft.—ground still hard, wet, and spare for sinking; in the same level, going east, the lode is at present small and unproductive; in the same level, driving west, the lode is between 2 and 3 ft. wide, yielding some very good work for lead—a promising end. In the 25 fm. level east, the lode is 1 ft. wide, composed of spar and stones of lead; going west, in this level, the lode will yield about a ton of ore per fm.—a kindly end. The men in the new western shaft are employed still in the 15 fm. level, cutting whim-plat. Nothing new in the tribute department.—September 17.

DEAN PRIOR AND BUCKFASTLEIGH.—In the 10 fm. level west we are driving on the south part of the lode, being of a promising character, composed chiefly of spar, about 12 in. big. I have nothing to state, as to the other underground departments, for I have been obliged to take the men out of the 20 and adit levels, in order to carry out the surface work with more force; but, having completed the excavations of the wheel-pit and necessary work, the men will commence driving the levels this day; and, in my next report, I shall be able to state the particulars as to the prospects, &c. The masons have commenced building the walls in the wheel-pit, and we shall get on as expeditious as possible; the whole of the surface work is progressing fairly.—Sept 20.

DEVON AND COURTENAY CONSOLS.—In the 30 fm. level west the lode is 1½ ft. wide, composed of killas, interspersed with branches of spar and mundic, and good stones of copper ore. In our end driving east, at this same level, the lode is 3 ft. wide, composed of mundic, peach, and soft spar—altogether a very kindly lode. In our deep adit level the lode is 1½ ft. wide, composed principally of spar; the killas under the lode is intersected with small branches of lead ore. On our north lode the men are making preparations to commence driving east of the shaft, which, I hope, will be completed this week. I have set a pitch to two men, to raise and dress lead and copper ore, in the back of the shallow adit level, for 10*s.* in the *l.* The engine-shaft is now down nearly 5 fms. below the 30 fm. level; the pitwork is in good order, and the engine works well.—Sept. 21.

GREAT HEWAS CONSOLS.—Since handing you my last report of our progressive operations in this mine, we have erected our 66-inch pumping engine, which is now in full course of working, and going from 11 to 12 strokes per minute. The pit-work is good, and fixed in a very workmanlike manner, which reflects great credit on the pitman. Three lifts of pumps are fixed from surface to 38 fm. under adit, two of which are drawing lifts on the old principle, and the other a double-acting one; its projection is quite new, and the object of its projector is a saving in the weight of pumps, room in the shaft, and a saving in the expenses, since a lift of 8¼-inch diameter, worked on this principle, is equal in power to a 12-inch on the old; it works well, and I believe that lifts of this kind will be generally adopted. The water is already pumped out 20 fms. under adit, and (barring accident) we shall have forked to the 36 fm. level within five weeks from this. Four horse-whims are erected—one on Stanley's, another on Vivian's, and one commanding corner and eastern shafts, and the other on Northy's and Strawberry shafts. In clearing Stanley's shaft from 8 to 10 fms. under adit, we came down on a "soliar;" and on removing it, found, by dropping a line, that this shaft is clear downwards, which circumstance is a fortunate one, since east and west of this shaft, in the back of the 24 and 36 fm. levels, we learn that hundreds of fathoms of good tin ground yet remain to be taken away; in confirmation of which, tributers are anxious to engage pitches there at 6*s.* in *l.*, even before the water is out; therefore, this shaft being clear of rubbish, soon after we get the water out, a great many tributers will be set to work. We are clearing Vivian's shaft under adit with all possible speed, and hope very shortly to set several pitches here; as the Vivians left a good lode going under adit, east of this shaft, which could not be worked deeper by them, the water being then to adit—we propose, therefore, to extend a level from this shaft 10 fms. under adit, to make backs for pitches; Vivian and Son are employed about this job of work. Good tin ground having been left going under adit from Corner shaft, eastward on Hewas lode, Carthew's lode, and Wheal Lamb lode, which are nearly parallel to each other, and only a few feet apart, we have engaged several men to remove rubbish to make pitches available here, and shall have completed it in a few days; one pitch is already taken on Carthew's lode at 6*s.* in *l.*, and two other pitches will be set on Hewas lode after the removal of the rubbish, at, I should say, from 8*s.* to 10*s.* in *l.* We have set a winze to sink from adit, east of eastern shaft, which is to communicate with the 24 fm. level, soon after which the above lodes will be available for pitches; and from present prospects, great profits will soon be realised from this part of the mine. Strawberry shaft (in future Carthew's shaft), which is situated in one of the most promising parts of the mine, is in course of clearing, and in a few days we expect to get to the bottom; this shaft is to be sunk on the course of Hewas lode with all possible dispatch, to meet a proposed cross-cut from Northy's in the 36. It is evident from reports, and from observation, that the late party lost Hewas lode, east of eastern shaft, and drove on a caunter lode, leaving Hewas lode in the south side of the "Gunniss"—so that, by extending the proposed cross-cut at the 36, from Northy's, say 15 or 16 ft., Hewas lode will be intersected; this done, and Strawberry or Carthew's shaft being sunk, 36 fms. of backs on Hewas lode will be available. This will certainly give the mine a new feature, and make the eastern part of this sett west as Hewas lode is standing whole, and untouched under adit, from 30 to 40 fms. therefore, Northy's, to the eastern boundary, which is nearly half a mile in length; and, cross-cuts from Northy's shaft being already sunk 40 fms. under adit, a succession of short sinks from adit, and a continuation of Carthew's shaft on Hewas lode, cannot fail to develope the [illegible] wealth of this part of the mine with a very moderate outlay. I have minutely inspected the workings, east of Carthew's shaft, above the adit (exclusive of those workings, and the nature of the [illegible] the aid of steam-power); and from the extent of have everything to warrant our active [illegible] in the few arches left, I hesitate not to say we realising, ere long, all we had anticipated as to the [illegible] and that we have every prospect of that the "Iron lode," named in my last report, has [illegible] and yields a good profit.

EAST ALVENNEY.—The indications in this mine are very flattering, especially that of the middle lode. The ancients sunk on the course of this lode about 3 fms. from surface, where they came in contact with a run of elvan, which somewhat disordered the lode. We commenced sinking one shaft in those workings, and have sunk about 3 fms., and, by so doing, we got through the run of elvan; and, after sinking about 9 ft., the lode began to improve, both in size and quality—inasmuch, that we have broken large and rich stones of tin and copper, the stones of copper are very encouraging, as every foot we sink it increases in quality; the lode is about 4 ft. wide—2 ft. of which is good saving work for copper; and the other part is good stamps work for tin; between the quires, or floors, of the lode, we break a great deal of blue can, or fluor-spar, with thin shells of malleable or native copper. On the north lode, the tributers are breaking good work for tin; and, if it continues as at present, they will get good wages. I find, by taking the underlay and horizontal bearing of those two lodes, that they will intersect each other at the depth of 21 fms. from surface; we may then expect more favourable results. We are about 100 fms. in granite; and the strata joining is a light blue killas, which, of course, is favourable for copper.—Sept. 23.

EAST CROWNDALE.—The ground in our engine-shaft is still very difficult to sink, it having a continuation of the same kind of ground as last reported on—we are now down 45 fms. 3 ft. The lode in the adit level, at Rix Hill is not so good as when last reported on—is now 4 ft. wide, composed of peach, capel, killas, and tin; you may expect from appearance a better account in my next, as the appearance of the end indicates an improvement. The ground in the shaft, sinking on this lode, is, I am glad to say, all saving work, and the ground favourable for sinking. We hope to hole to the adit level in the next week, when we shall proceed to sink below the adit level on a good course of tin—our engine and pit work all in good order.—Sept. 18.

EAST TAMAR CONSOLS.—The lode in Harrison's shaft is 2 feet wide, saving work. The lode in the 54 fm. level north is 20 in. wide—fluor-spar and ore; the lode in the 54 south is 15 in. wide—a very kindly lode. The lode in the 46 north is 20 in. wide—fluor-spar and ore, work of a good quality; the lode in the 46 south is 10 in. wide—capel and spar, with some spots of lead. The lode in the 38 south is 18 in. wide, good work. At Charlotte's, we have commenced sinking the shaft under the 11 fm. level; the lode in the shaft is 2 ft. wide—fluor-spar and ore, a very kindly-looking lode. The lode in the 11 fm. level north is 18 in. wide, saving work.—Sept. 20.

GREAT WHEAL MARTHA.—We have driven east about 8 ft., and find the lode getting more compact, and somewhat improved; it is at present 5 ft. big, 1 ft. of which is composed of mundic, spar, and copper, and the remaining part spar and capel, intermixed with copper and mundic. In getting off from the cross-course, we expect still further improvement; the ground is more favourable for driving, and indications good.—Sept. 18.

HOLMBUSH.—The diagonal shaft is sunk 10 fms. 3 ft. below the 120 fm. level, the ground in which is still favourable. The lode in the 120 fm. level, west of the great cross-course, is 14 in. wide, composed of spar, mundic, and spots of ore. The lode in the 110 fm. level (south) is 20 in. wide, composed of spar, flookan, and stones of lead—saving work; the lode in the rise above this level is 2 ft. wide, composed of flookan and stones of lead, which is saved and stamped. The lode in the 100 fm. level (south) is 2 ft. wide—the middle part of which, at present, is poor; in the back and bottom of this level there is a good branch of lead, worth 12*l.* per fm.; the pitches in the back of this level are not quite so productive as they have been, but are still yielding some good lead work. The lode in the 90 fm. level (south) is 20 in. wide, composed of spar, flookan, and stones of lead, all of which goes through the process of stamping. Our lead parcel weighed 15 tons 5 cwts. 1qr., and was yesterday put on board the *Active*, trader, Southward, master, at Plymouth, for Truro.—September 21.

ILAM.—I find that the end, driving towards Brown's shaft, on a lode, was cut 9 fms. 1 ft. west of Robins's shaft, and we have driven on the lode 4 fms.; we have now to drive on the course of the lode 30 fms., to get back opposite Brown's shaft; if the lode keep its regular course, we shall have to drive a cross-cut south 12 fms., to get under Brown's shaft, which will make 42 fms. From the bottom of Robins's shaft to the bottom of Brown's shaft is 32 fms. 3 ft., and the cross-cut is driven towards Brown's shaft 7 fathoms, which will leave 25 fms. 3 ft. more to drive to get back under Brown's shaft. It is my opinion, that Brown's lode has split up in branches; as we drive towards the shaft, and get under the 20 fm. level, east of Brown's shaft, I think the lode will again become settled, and I have no doubt be productive. If the lode cut in the 67 fm. level, west of Robins's shaft, prove Brown's lode, it has taken an underlay north 2½ ft. in a fm., where in the 67 fm. level the lode has a perpendicular underlay; I cannot call it Brown's lode, and if I could do so, I would not advise to spend one pound in driving; I think it advisable to sink a little on the junction of both lodes. For the further working of the mine, I would recommend Robins's shaft to be continued sinking 15 fms. under the 67 fm. level, and then drive east and west, in order to get to the bottom of the cavern, where I have no doubt we shall have a bunch of copper; I would also recommend driving the end, north of Robins's lode, to cut the perpendicular lode, and drive the 67 fm. level, east of the shaft, to cut the lead lode; and also drive the cross-cut, which I have no doubt we shall meet with the lode in Brown's shaft—I consider it will save 90*l.* by driving the cross-cut, to what it would to drive on a lode towards Brown's shaft. In conclusion, I have not a doubt but Ilam Mine will make a good paying mine—it has one favourable indication, that the lodes are larger in the bottom levels than in the levels above, and I go by the stones of copper which were broken from the lodes; and, in my opinion, there must be a large deposit of copper not far off.—Sept. 18.

KIRKCUDBRIGHTSHIRE.—Stewart's shaft is 10 fms. 3 ft. 3 in. under the 40 fm. level; the lode here is 2 ft. 6 in. wide, but poor; the lode in the 40 fm. end west is 5 to 6 ft. wide, producing about three-quarters of a ton to the fathom; a part of the lode here has taken north, and yielding about the same quantity of lead. The lode in the 30 end west is 3½ ft. wide, producing stones of lead; the rise in this level is improving for lead—should say, 15 cwts. per fm.; and the same will apply to the stopes in the same backs, 5 or 6 fms. east of the said rise. The lode in the 20 end west is 2½ ft. wide, producing half a ton per fm. of lead; the stopes, in the back of this level, are worth 9*l.* per fm. The stopes under the 30, and sinking under the 20, are worth about 8*l.* per fm. On the 15 inst., we shipped 41 tons 12 cwts. of ore for the past month. The crusher and water-wheel are in course of erection.—Sept. 18.

LEWIS.—The lode in the 60 east is 5 ft. wide—worth 12*l.* per fm. for tin, and very promising; in the 60, west of the sump whim-shaft, we are continuing the cross-cut south, towards the south branch—ground hard. The lode in the 50 east is 4 feet wide, and worth 9*l.* per fm.; the lode in the 50 east, on the south branch, is 18 in. wide—worth 12*l.* per fm., and very kindly. The lode in the 40 east is 2 ft. wide, and worth 3*l.* 10*s.* per fm.; the end is now suspended until we can get Praed's shaft to the same level; we are continuing the cross-cut south from the copper ore shaft, in the 40 fm. level—ground favourable. The lode in the 30 east is 2½ ft. wide, and worth 3*l.* per fm.; the ground in the 30, south from Wheal Oak shaft, is harder than it has been for many fathoms driving. The lode in Praed's shaft, sinking below the 20 fm. level, is 3 ft. wide, and worth 5*l.* per fm. for tin. Our tributers are working with spirit, and making fair wages at their different tributes.—Sept. 18.

MENDIP HILLS.—The lode in the 38 fm. level, south of Stainsby's shaft, assumes a more favourable appearance than it did when I last wrote you—being about 2 ft. 9 in. wide, composed of very soft white spar and flookan, intermixed with small particles of lead; the ground is also a shade easier for driving than it has been. No important change has taken place in the winze sinking below this level; the lode continues about 3 ft. wide, consisting of quartz, flookan, spar, &c. In the slag department we have the principal part of our men engaged in excavating the foundation for the engine-house, furnaces, &c., which is being done with all possible dispatch. I have just received information, that the machinery for the engine, &c., will arrive at Bristol this day; should no unforeseen obstacle intervene, I intend making preparation for removing it to-morrow, to get it on the mine the following day.—Sept. 22.

TINCROFT.—There has very little alteration taken place in the lode in the 100 fm. level, at new engine-shaft, since last report—each end is producing saving work for copper ore, worth, on an average, 10*l.* per fm. The lode in the 90 east is 4 ft. wide, producing occasional stones of ore, with some tinstuff—a promising lode; the lode in the 90 west is 2½ ft. wide, producing 2½ tons of ore per fm., worth 5*l.* per ton; the lode in a winze, sinking on this level, is worth about the same per fm. as the end. The lode in the 80 east is 3 ft. wide, producing tinstuff and kindly—this end will soon be under the productive tin-ground gone down in the level above; the lode in the 80 west is 2 ft. wide, worth 8*l.* per fm. The lode in the 70 east is 3 ft. wide, in a hard channel of ground, and unproductive at present. The 70 and 50 ends west are suspended, being near the boundary. The lode in the 60 west is 15 in. wide, producing about ores enough to pay for driving. The lode in the stopes, in the bottom of the 90, is 3 ft. wide, worth 15*l.* per fm. The tribute department in this part of the mine continue, on the whole, much the same as for some time past. At Palmer's shaft, in the 80 fm. level, we are cutting through the north part of East Pool lode, we find it orey and very promising, much the same as in the level above; immediately over the lode in the winze, to the west of the shaft, now down to the 80 fm. level, is 2½ ft. wide, worth 12*l.* per fm. The lode in the 70 end west is 4 ft. wide, worth 20*l.* per fm.; the lode in the end, driving from the winze to meet the 70 west, is 4 ft. wide, worth 20*l.* per fm. The lode in the 48 west is 2 ft. wide, worth 12*l.* per fm.; the pitches in this part of the mines continue to look well; we continue to drive the adit from Stainsby's shaft towards the adit from East Crofty. Chappel's lode, in the south mine, continues to look well in the pitches in the back of the 100 and back of the 90; but the ends east and west are poor for copper; but we have just discovered a lode in the 90 fathom level, bearing north-west, which is worth 20*l.* per fm. for tin; we shall drive to cut this lode, in the 100 fm. level, at once; it is now likely to make a good lode. The lode in the 142 east, and the rise in the back of the level, continue large, producing fair quality tinstuff. The same may be said of the lode in the winze, sinking below the 120; the lode in the 120 east is 4 ft. wide, worth 15*l.* per fm. for tin. The winze in the bottom of the 100 is worth 15*l.* per fm.; the pitches continue to yield fair quality tinstuff. At Wheal Providence, we have forked the water to the 12 fm. level, and are clearing the levels east and west as fast as possible; we have examined the lode as far as we could go, and like its appearance very well. Some stones, which we broke from the back of the 12 fm. level, have made a high per centage for copper; on the whole, I consider our prospects very cheering. I hope we shall get near 600 tons of copper ore for next sampling.

NORTH WHEAL FRIENDSHIP.—We have completed the arch between the shaft and river, which has turned out a good pile of tin, as well as unwatered the end; the men have resumed driving the end, and are breaking good stones of tin.—Sept. 23.

SOUTH FRIENDSHIP WHEAL ANN.—In driving the 52 fm. level east the lode is somewhat improved, and we are breaking good stones of copper, as well as lead. In driving the cross-cut south, in the 28 fm. level, in order to cut the south lode, the ground is favourable for driving, which we have set for 2*l.* per fm.—Sept. 23.

SOUTH TAMAR UNITED.—The water is forked 10 ft. under the 80 fm level, and the ground secured, which was alluded to in our last report; the men have commenced cutting ground for bearers and cistern, to fix the plunger-lift, which work will be done as expeditious as possible. The lode in the south end of the shaft, under the 80 fm. level, is not worked away; in the end of the shaft the lode is 20 in. wide—fluor-spar and ore, a very kindly lode; the timber in the back of the level is crushed, and the level full of rubbish. I think it would be advisable to set it to clear on Saturday next, being our survey day.

SOUTH WHEAL TRELAWNEY.—Snell's engine-shaft is in course of sinking, with nine men, down in the 11 fms. from adit—ground favourable; water increased a little since last report.

TRELEIGH CONSOLS.—Christoe's sumpmen are putting in penthouse, and will begin to sink below the 110 in a day or two; in the 110 fm. level, east of Christoe's, the lode is 1 ft. wide—it is rather of a promising nature, but little mineral; the 110, west of ditto, is driving north-west on the cross-course. In the 100, east of Garden's, the lode is 2½ ft. wide, with stones of ore, and very kindly; in the 100, west of ditto, the lode is 3 ft. wide, but very little ore, ground hard. In the 90, west of ditto, the lode is 14 in. wide, worth 6*l.* per fm., ground hard for breaking. In the 80, west of ditto, the lode is 18 in. wide, worth 9*l.* per fm.; in the 80, east of ditto, the lode is 2 ft. wide, producing but little mineral. In the 70, west of ditto, the lode is 2 ft. wide, worth 5*l.* per fm.; the lode in this end has a very fine appearance. In the 60, west of ditto, the lode is 3 ft. wide, of a very promising nature, with a small quantity of ore. In the adit east, on Parent lode, the lode is 2 ft. wide, with good stones of ore in the north part of the lode; the shaft below the adit, on ditto, is stopped for the present, having got water; the men are clearing and laundering the adit; when completed, we hope to sink again, having at present no level calculated to take off the water when drawn up. The winze, from the 80 to 90, west of Garden's, is completed; those men are in the 90 since. The reason for laundering Wheal Parent adit is, the bottom for a great length is all worked away for mineral.—Sept. 18.

WEST WHEAL JEWEL.—The rise in the back of the 70 fm. level, west of Hodges's cross-course, on Wheal Jewel lode, is up to the 57 fm. level; we have commenced driving east in this level; no lode taken down in the past week. In the 80, west of Quarry shaft, on Tolcarne tin lode, the lode is 20 in. wide, worth 8*l.* per fm. In the 12 fm. level, west of Quarry shaft, on same lode, the lode is 1 ft. wide, worth 8*l.* per fm.; in the rise, in the back of the 12 fm. level, east of Quarry shaft, on the same lode, the lode is 9 inches wide, worth 5*l.* per fm. In the deep adit end, west of Quarry shaft, on same lode, the lode is 15 in. wide, worth 5*l.* per fm. In the stopes, in the bottom of the adit, east of Pryor's winze, on the same lode, the lode is 2 ft. wide, worth 20*l.* per fm. In the shallow adit end, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, worth 5*l.* per fm.—Sept. 20.

WEST WHEAL MARIA.—The lode in the 38 fm. level, west of the eastern engine-shaft, continues to improve, and is at present about 4 ft. wide, composed of mundic, spar, and prian, with good stones of ore—altogether as promising a lode as can possibly be seen; the plat in this level is now completed, and we hope to resume sinking below it on Wednesday next; at the western engine-shaft we are still engaged cutting a plat in the 64 fm. level, which will be completed with all possible dispatch. In the 54 fm. level, east of this shaft, the lode is 4 ft. wide, composed of spar, mundic, and capel, with occasional spots of ore; in the cross-cut south, in this level, the ground continues rather hard for driving.

WHEAL ADAMS.—The lode in the western rise, in the 50 fm. level, which is 1 ft. wide, is improved, as is the ground contiguous to it; and the indications are favourable for the production of lead. The stopes in the rise in the middle lode continue to produce a fair quantity of blende; but the lead part is rather deteriorated, although large stones are frequently met with, which, on the whole, will about pay the cost of raising the former. The lode, in the stopes, in the 40, is 6 ft. wide, containing granular galena disseminated throughout it, and worth 10*l.* per fm. The ground in the end extending north of the new engine-shaft is favourable for driving; we have to extend it about 9 fms., to reach the eastern lead lode. The pitch in the back of the 40 (Noble's), on the western silver-lead lode, as also that in the 18 fm. level, are much improved, and the tributers are earning good wages. Men are fixed to stope-ground, in the 28 fm. level, which is producing saving work, and likely to lead to other important discoveries.—Sept. 21.

WHEAL ANDERTON.—The engine-shaft will be down to the 70 by Saturday fortnight, when we shall immediately put out a cross-cut to take the lode, which I think is within 3 fms. of the shaft. The tribute pitches in the 60 are turning out well, both for the adventurers and men—one at 8*s.*, and the eastern pitch, east of engine-shaft, at 4*s.*, in the *l.* We have made a communication from the new engine-shaft to the old one to-day, in the 30 fm. level, which will ventilate the mine, and answer the purpose of a footway, both very desirable for future operations. The engine-house is ready to receive the castings, to proceed with the immediate erection, for the purpose of drawing our stuff, as well as stamping the ore, which has been greatly delayed, in consequence of the scarcity of water—therefore, returns have not been made so speedily as would have been the case if the necessary power had been at command; however, these obstacles will be superseded in future, by the application of the new steam-engine. The prospects are extremely good; and, in every respect, as far as we can calculate, likely to be lasting and beneficial.

WHEAL BLENCOWE.—In driving our north end, in the 8 fm. level, we have, since last report, cut another east and west lode, about 4 ft. wide; it is a strong and kindly-looking lode; and throwing out plenty of water, which is a good indication. The other east and west lode, which was cut about three weeks ago, is still looking very well; it will now average about 18 in. wide, saving work; the tin is of a very superior quality. We are still continuing to drive the north end, as we have in the east and west lodes, in prospect, which we hope to cut soon. The pitches in the mine are turning out large quantities of work. We have now about 800 or 900 sacks of work broken for the stamps, of fair quality. We do not hesitate to affirm that the mine never wore a more cheering aspect than at present; having, to our knowledge, no less than two east and west lodes, and a very large branch, and the north and south lode—from which nearly 4000*l.* worth of tin has been already returned; and, to our satisfaction, we have a great many hundred pounds' worth more discovered, which will pay well for taking away.

WHEAL CURTIS.—Fegan's shaft is sunk 12 fms. 4 ft. below the adit. Hallett's shaft is sunk 10 fms. below surface; the lode in this shaft is looking well, it is now composed of gossan, spar, mundic, and yellow copper ore, from the general appearance of this lode, we cannot be far distant from copper ore. We are preparing some 20 fm. ladders for the old engine-shaft, in order to clear up the east part of the mine, that no time may be lost in ascertaining the state of the levels in the neighbourhood of Curtis and Teague's shafts, with the hope of raising ore.

WHEAL SAMSON.—We have driven about 35 fms. from the cliff on the course of the lode, which will average about 4 ft. wide; it is still composed of large stones of mundic and blue flookan, underlaying about 2 ft. in a fathom, with two very smooth walls. There is no material alteration since my last, except the ground is getting softer for driving, which accounts that we are getting near the junction of the north and south lode.—Sept. 23.

## FOREIGN MINES.

ALTEN MINES.—*Mining Report, from the 4th to the 25th August*, 1847:—

*Raipas.*—The prospects of this mine continue to improve, and a greater appearance of permanency is held out, than has been the case for some years past. An important alteration has taken place in the 10 fm. level southerly, near Monk's shaft, where a new and rich part of the lode has been discovered in the bottom of the level. The gossan has now given place to quartz and purple ore, and should the operations in this part continue equally productive hereafter, we shall be able to make reserves of orey ground for excavating in the winter, in addition to a fair profit on the present workings. In the 5 fm. level, from Monk's shaft, a good course of dredgy ore has been discovered—it holds out most favourable prospects, but must be more extensively explored before we can venture an opinion on its permanency. Labouchere's continues as last reported, and Carr's yields the usual valuable returns. The roof stope above the shallow adit is a continuation of Labouchere's lode towards the surface—at present this is one of our most valuable workings. At the surface the exploratory workings are conducted on a large productive and promising lode, which, from its situation and general appearance, may readily be assumed to be the outcrop of Labouchere's; and should subsequent trials prove this to be the case, we may look forward to some valuable reserves, although not very extensive. By reference to the accompanying ore delivery note, it will be seen that a great part of the stock on hand has been returned to the smelting-house—during the present month we hope to deliver the remainder, and have no doubt that the results will be highly satisfactory, and fully bear out the expectations held out in my latter reports.

*United Mines.*—An improvement has taken place in the new level from shaft E, which produces good ore, and makes reserves for working on in the winter. The stopes continue to yield the usual fair returns.

*Ryper's.*—In consequence of a scarcity of hands, the exploratory works has made but comparatively slow progress; but, with the few workmen employed, the results must be considered very successful, and much beyond our expectations. Two more lodes have

latterly been discovered in the vicinity of the Old Mine—each contains good ore, and presents the usually favourable indications at the surface. A further trial in depth will be necessary before we can venture to speak of their permanency or value. The other workings have not deteriorated.

*Mancur's.*—The lode in the stope has also undergone a trifling improvement, and looks more promising, but the compact nature of the ground is a great impediment to our progress.

*Michell's.*—The operations are at present confined to the attle heaps at the surface, and tribute pitches in the mine. The returns made equal our expectations.

*Old Mine.*—Most of the workmen have been employed at the smelting-house and unloading coal vessels—the produce of this month will, therefore, be less than last. The prospects, however, continue equally promising.

*Wilson's, Powder House, Carl Johan's, Cole's, and New Locke* have latterly been but partially worked on account of a scarcity of hands; we hope, however, shortly to resume their workings, and prosecute them with greater regularity.

*Ore Dressing.*—A gale of wind, on the 11th inst., blew down and completely destroyed about 100 fms. of launders, and for the season put a stop to further operations in this department. It will not, however, subject us to any great inconvenience this season, as the greater part of the halvans had been stamped and dressed prior to the accident. A part of the smalls from Ryper's and Mancur's must remain until next summer, unless we get much rain in the autumn, when we may still, perhaps, succeed in jigging and returning them to the smelting-house. Our returns for August will be found less than for the preceding months, in consequence of several of the workmen having been engaged with the hay harvest, and many of them were also employed at the smelting-house, unloading and ballasting vessels, &c. I do not, however, anticipate any material falling off; and should any temporary disparity occur, it must not be attributed to any deterioration in the lodes; which, on the whole, have not been so promising and productive for several years past. I beg to refer you to the accompanying note of ore delivery for July, amounting to 26½ tons of fine copper. The assays point out the improved quality of the ore since the tribute system has been introduced among our workmen, with whom it appears also to work well.

ST. JOHN DEL REY MINES.—*Morro Velho, July* 8.—Produce for June, 13,891 ozts. equal to 133 lbs. 5 ozs. 7¾ dwts. troy, from 3336·8 tons of ore, according to the reduction account, yielding 4·16 ozts. per ton of ore; but, according to Capt. Treloar's measurement, the mine has supplied 3550 tons, out of which there remained on the spalling floor unstamped, at the end of the month, about 150 tons, showing that the quantity actually sent to the stamps must have been nearly 100 tons more than reckoned by Mr. Smyth. Having brought the two compartments to compute their tons on the same standard, I had hoped these discrepancies between their respective returns would have ceased. Cost for June, rs. 27,517 21$, at 28½, 3239*l.* 0s. 1d. In the accompanying cost-sheet, you will perceive, that the real quantities and cost of the materials and provisions actually consumed during the month are inserted according to the plan laid down by the board, in their letter of the 4th Sept., 1846, though now, for the first time, carried into execution. You will also receive herewith, for the first time, the general statements of the store and provision accounts, showing the movements therein for the month of June, and the stocks on hand on the 1st July. The amount of materials consumed in June (rs. 8902 790), will, probably, strike you at first as being extremely heavy; but that sum includes not only all the stores received from England, and issued for consumption during the month, with their freight, &c., but likewise the duties at Rio, and carriage from Rio to Morro Velho. This month's cost will, probably, be somewhat lighter, under the head of hired cars (in which I am effecting a considerable diminution), of boyer iron (the consumption of which was heavier last month than usual), and of parties to and from Brazil—I hope, therefore, they may not much exceed rs. 26,000 for July, and afterwards they will, probably, fluctuate between rs. 26,000 and rs. 27,500. In handing you the medical report, I have much satisfaction in informing you, that the establishment, generally, has never been in a more healthy state.

*July* 17.—Gold extracted to date, 5909 ozts., from 280 86-100ths feet of sand—equal to 21·03 ozts. per cubic foot of sand. Stamps working during 17 days, 67 88-100ths heads. Supply of stone abundant, and enables the spallers to pick the ore, though not to any great extent—nor am I anxious to see it thrown off the floor in large quantities; for, whenever that is the case, as much good as bad stone is thrown upon what is termed the refuse heap; being an evident waste of time and labour. Far better will it be when the contemplated increase of our stamping power (which I hope to have in progress, if not completed, before I leave this country) shall enable us to submit to the stamps every stone, good or bad, that comes up from the mine.

*Mine.*—Notwithstanding two or three annoying breakages of basket-rods and kibble-chains, the last of which let the water into all the sumps, causing a delay of 19 hours on that portion of the works, the mine operations in general are progressing with spirit; and the borers, varying from 185 to 190, are doing good service.

*Mechanics.*—In consequence of the progress that has been made in preparing the Bahu sump-shaft for the reception of the new pit-work, the mechanics are obliged to strain every nerve to get this forward; of this you will, perhaps, be enabled to form some idea, by the following requisition which Capt. Treloar sent in, three days ago, to the mechanics' department.

*Champion Ground.*—You are aware that the lode at the western extremity of the mine was, some years ago, lost or terminated by a wall of killas, in consequence of which that part of the mine was abandoned by Mr. Herring; some three or four weeks since, Capt. Treloar expressed to me a strong opinion, that the wall of killas, though it interrupted, did not terminate the lode—he added, that he had traced the lode, as well as remains of old workings, still further to the westward; and that, as the Bahu had formerly been stopped by a bar of killas, which divided it from the Quebra Panella, he thought that the bar of killas, which now stopped the Champion lode, would, in like manner, if penetrated, open out on a similar extension of the lode to the westward.

Having subsequently gone over the ground with him, and got him to point out the indications of lode, and of former workings, I felt at once the great importance of investigating the matter more closely, since there can be no comparison between the advantages likely to result to the company from a continuation of our own lode, closely connected as it would be with our hauling engines, pumping wheels, stamps, &c., &c., and those which could be derived from any more distant discovery, however rich it might be, but which would involve the necessity of separate machinery, and of separate establishments. Capt. Treloar, therefore, in compliance with my desire, proceeded to make a regular survey of the ground, and of the supposed direction of the lode; he submitted his ideas to the under captains, who all agreed in the probability of the lode continuing westward; and, having held a consultation with them as to the best and most economical method of proceeding to test the fact, the result of their deliberations has, at my request, been embodied by Capt. Treloar in a written report, accompanied by an explanatory sketch, both of which I now send forward for your information and government. I have only to add, that immediate measures shall be taken to provide Capt. Treloar with the six men he asks for—so that this interesting investigation may be prosecuted without delay.

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WHEAL REYNARD MINE, PLYMPTON.—A very good discovery has been made within the last day or two. In sinking on a lode, about 10 fms. from surface, they find it worth at least 20*l.* per fm. for tin; we hope this may continue—if so, it will be a good thing for this neighbourhood. This concern is thought to be of great promise, there being many lodes in the sett. It is at present held by very few persons.

DYFNGWM LEAD MINES (Montgomeryshire).—I returned to town, late last night; but, from having received injury, from an accidental upset, after leaving Rhayader, I shall not be able to get out of doors for a few days, which must be my apology for so unbusiness-like a notice of your mine at Dyfngwm. Herewith I send you a small sample of lead ore I took, myself, out of the 22 fm. level, and in the extreme forebreast of the work. The lode is very strong in metal in both the east and west lodes of that level; it also proves very good in the 16 fm. level; and a winze, that has been sunk from the 16 to the 22 fm. level, has gone down in extremely fine ore. I have seldom seen a mine giving better assurances of permanent profit. I should add, that the Esgair-galid lode, worked in the property immediately adjoining your mine, at a very large profit, runs through your property; and that it can be opened, and worked in conjunction with your present mine, to very great advantage, and must add greatly to its intrinsic value.—Sept. 22.—[The foregoing account of Dyfngwm (pronounced Dungoom) agrees, we are happy to say, with the accounts of Capt. Francis, Mr. Dixon, and others, who have seen them, and reported thereon. There is scarcely an example on record in geology in which a vein has been cut out, or its termination been reached. Dyfngwm was abandoned by the people who previously worked it, from want of capital. Now that capital is being employed, its resources are developing themselves weekly; and its dividend is about 7½ per cent. The vein in this mine can never be cut all out; for the deeper the miners go, the lead increases in quantity and quality; and the Esgair-galid lode will not be all cut out in 200 years. The lease of the present company is for 50 years—48 of which are unexpired; and they look for a return of 30 per cent. in the course of the next two years.]

We regret to call attention to an advertisement in to-day's Journal, announcing the sale of the Lamvet Consols Mine, from circumstances beyond control. The monthly loss, we are informed, is comparatively inconsiderable, and it has been thought that, by sinking to a deeper level, the prospect of a successful mine would be realised. We hope adventurers may, at all times, be found to prevent the sacrifice of mines, offering fair prospects; and, in this instance, as the time for examination is necessarily limited, we shall be glad to hear that new adventurers will prevent abandonment.

We have been given to understand, a considerable portion of the shares in the South Wheal Sophia, situate on the banks of the River Tamar, have been subscribed for by some of the fortunate adventurers in the Devon Great Consols—a mine on which 1*l.* per share has been paid, but which have lately been sold at 250*l.* pm. The lodes of the South Wheal Sophia run in a parrallel direction with the above valuable property.

WHEAL FORTESCUE.—In our notice of the meeting of this company, in our last Journal, the statement of accounts was omitted.—The balance from last account was 63*l.* 8s. 8d.; by 8th call, made July 5, of 10s. per share, 128*l.*—191*l.* 8s. 8d.—The June cost was 31*l.* 4s. 3d.; for July, 41*l.* 12s.; for August, 40*l.* 11s. 8d.—leaving balance in hand of 78*l.* 0s. 9d.

MINERS' HOUSES IN SCOTLAND.—Dwellings for 100 miners, commenced at Craigmark, Ayrshire, a short time since, are now nearly all finished—their external appearance is remarkably neat, while within every attention has been paid to the comfort of the inmates; a school-house, store-house, &c., are also to be erected. A quarter of a mile further up the hill are rich mines of black-band iron ore, ready for working; coal pits are being sunk and supplied with good working engines there, as well as at Burnfoot.

The extensive iron-works situated in the park of Messkirch, Duchy of Baden, and belonging to the Prince of Furstenberg, have just been destroyed by a violent conflagration. The damage caused by this fatal catastrophe is valued at several millions, a very small part of the property being insured. The buildings which have been destroyed are estimated at upwards of 150,000 florins (16,000*l.*). About 900 workmen were employed in the foundry of the Prince of Furstenberg, and are now, with their families, destitute of the means of existence.

## EAST ALVENNEY MINING COMPANY.

A general meeting of shareholders was held at the Bedford Hotel, Tavistock, on Tuesday, the 14th inst.—FREDERICK S. THOMAS, Esq., in the chair.—Reports were received from Captains John Spargo and Gregory, of the most favourable character. The tin which they had broken upon the back of the lodes, and upon which they were sinking, was of most excellent quality, being presumed to be worth about 60*l.* per ton. But the chief improvement was upon the middle lode, where the squats of crop tin, through which the shaft was sinking, had been immediately followed by rich stones of copper ore. This lode was going down in granite, nearly perpendicular, and was daily improving in quality and size, being about 4 ft. wide—all good saving work. The north lode had quickened its underlie, and was dipping into the middle lode—clearly indicating a junction at no considerable depth. The shaft was not at present sufficiently below the old workings to afford proper backs for driving and stoping; but it was stated by Captains Spargo and Gregory, that if the quality of the lode continued as at present for the next 10 fathoms in sinking, it would be of great value; and that all mining experience left no reasonable doubt of a very rich course of ore at the junction of the lodes. It was, therefore, resolved: "That the operations on the mine be confined to sinking the shaft on the middle lode, and to the erection of stamps and grinders, with all possible speed, to return the ores from the pile at grass.

## GREAT WHEAL MARTHA MINING COMPANY.

A special general meeting of shareholders in this company was held at the office, Winchester-house, Old Broad-street, on Wednesday, the 22d inst., GEORGE THOMAS, Esq., in the chair.

The CHAIRMAN first read the usual weekly report from Captain Peneluna, and the following report from Captain Prince:—

*Great Wheal Martha Consols Mine, Sept.* 20.—I have again visited this mine, and beg to inform you, that the lode in the 40 fm. level east is at least 6 ft. wide, with regular and well-defined walls—the rock being of a congenial character for copper; the lode consists of hornstone and quartz, containing mundic, with a small quantity of yellow copper ore; it is evidently disordered at the extreme point by small cross veins, which will only, however, affect its properties at the intersection. About two fathoms behind the end the lode produced some tolerably good saving work. I observed that the water in the western end (suspended driving) was of a much higher temperature than it was in the east level, which was the case with that issuing from the 90 end east in the old mine—indicative, in my opinion, of a body of ore being deposited between the old and new mine. It is still my opinion, that Wheal Martha, if worked at a proper depth, would be found a productive, profitable, and a lasting concern. I must, however, repeat what I have often said—it would be folly to expend much money in exploring the lode in the hornstone. The bottom of this must be reached, where, if you will allow us to judge from analogy, shoots and courses of ore will be found. Several instances, which came under my immediate observation, might be named; but I will only mention one. The lode in Wheal Josiah (Devon Great Consols Maria) consisted almost wholly of hornstone, very like that taken from the middle adit at Wheal Martha. It was found below the 40 fm. level; but in the 50 it was replaced by a solid course of ore, nearly 8 ft. wide, from which I have been told six men have raised nearly 600 tons during the past month. We do not, of course, pretend to tell you at what depth the hornstone reaches; it is found at various depths, depending on the geological position and chemical composition of the rock formation in the different localities.

The CHAIRMAN then read the notice convening the meeting, which was for the purpose of considering the best means of winding up the concern, or leasing the sett to a new company; when a PROPRIETOR inquired, had they not met also to consider a further call on the preference shares?

The CHAIRMAN observed, that there were 130 allotted preference shares, on which the first 1*l.* call had not been paid, although he had no doubt it would be.—The same Proprietor then said, that when at the 20 fm. level they had a good course of ore—in fact, so good that it had led them to go on as far as they did; it now wanted but 12 fathoms to come under that ore ground, in the 40 fathom level; and justice would not be done to the original shareholders until that point was seen. If it cut rich, they would be enabled to issue new shares, or succeed in any other plan; if poor, why then they could give up the mine with a good grace.

After some conversation, the Chairman having moved the adoption of the plan for leasing the sett to a new company, Mr. MURCHISON rose to move an amendment; he said, the directors' plan having been read, he wished to bring the general discussion of the meeting to a more definite point; he felt it to be a duty he owed his brother shareholders, to assist in upholding their just rights and privileges, and he would endeavour to show that the principle of his amendment was founded in reason. In the plan laid before them some months since, for the issue of new shares, for the purpose of raising additional capital, certain advantages and inducements were held out to those who took up the shares, and it was solely on account of these inducements that parties paid their first call of 1*l.* per share; by so doing they had fulfilled their part of the agreement, and of course expected the directors to perform theirs; instead of which they were now asked, to forfeit not only all the advantages which were held out and entertained, but the money which they had paid also. He could only say, that if the directors carried out their plan in its present shape, they would seriously shake the confidence of the public in the directors of such undertakings. He concluded by moving, "That holders of preference shares, upon which 1*l.* per share has been paid, be entitled to an equal proportion of shares in the new company, in the event of leasing the mine from the old one, with 1*l.* considered paid."

This amendment having been seconded by Mr. BLACKWELL, as proxy for Mr. White, was carried—the directors not opposing it, as they expressed themselves willing to adopt any measures the meeting might consider best, the CHAIRMAN stating, that their wish was to secure the greatest advantage to the old shareholders, and, at the same time, sufficient funds for developing the lode at a greater depth, as recommended by Mr. P. N. Johnson, Capt. Prince, and the several other agents, who have lately inspected the mine—their opinions being, that, in depth, the lode would, in all probability, be productive and profitable. It was anticipated that the lode, in the 40 fathom level, would have given satisfactory results, and justified the expectation of further improvement in the 50 fathom level, and the capital proposed to be raised by the preference shares was calculated accordingly. The lode in the 40 has since been cut; and not being yet found productive, or sufficiently changed in its character, to induce any sanguine expectations, until reached at a much greater depth, another plan to raise increased funds became imperative; and the directors lost no time in calling the shareholders together on the 2d inst., and submitting a mode which they thought most likely to ensure the needful funds. If, however, this mode, as now altered, at the wish of the proprietors, giving additional advantages to the old and preference shares, can be carried into effect, the directors will be much gratified (holding a large interest), and will assist it in every way in their power.

Mr. MATTHEY said, in the formation of a new company, the old one should not be lost sight of; he thought that the payment of 3000*l.*, even in addition to the 490*l.* a-year rent for three years, would not be doing justice to the old shareholders, if the mine should turn out rich.

Considerable discussion ensued on this and other points of detail; when it was at length agreed to unanimously, that the amendment should be engrafted on the original plan, which should be altered, to ensure to the old shareholders a per centage payment out of profits, and, together, the following is the plan:—

PLAN.—To take steps to get in all arrears due from shareholders, and pay off liabilities; and that this company do discontinue further working, cancel further calls on the allotted preference shares (2*l.* per share), and annul the further issue of any new preference shares; and that another company be established, on the Cost-book System, to be called the "New Great Wheal Martha Consolidated Mining Company," dividing the mine into 2000 shares, of 3*l.* 10s. each (7000*l.*), payable by instalments of 10s. each. The present company to let the mines to trustees for the new company, who are to pay a rent for them (including engine and all materials, houses, buildings, &c.) for three years—say to 30th June, 1850—of 400*l.* per annum, payable half-yearly, as interest on value of the engine, &c., and for privilege of option to purchase the engine, and for fair wear and tear of the same. The new company to have the option of cancelling the above lease at any time within the above term, by returning possession of the sett, engine, &c., &c., or immediately on the expiration of such term to purchase the same, by agreeing to repay to the holders of all original shares in the old company, upon which 5*l.* per share has been paid, the full amount of such 5*l.* per share; this repayment to be made by the new company at the rate of 10 per cent. out of its net profits; but should the new company at any time abandon operations before the complete sum before-named, as agreed to be paid out of the profits, is so paid, then the sett, together with the engine, &c., &c., now on the mines, to revert to the proprietors of such of the original 4000 shares of the now existing, or old, company, upon which 5*l.* per share has been fully paid up.

The foregoing plan is subject to the two following resolutions:—

That the holders of preference shares, upon which 1*l.* per share has been paid, be entitled to an equal proportion of shares in the new company (in the event of its leasing the mines, &c., from the old company), with 1*l.* considered paid thereon.

That in the event of the new company not being formed, and the whole number of shares (2000) not being subscribed for before the 6th October next, that the company be dissolved, and the committee be fully empowered to dispose of the property of the company, either by public sale or private contract, and wind up its affairs without delay.

Nearly 900 shares were subscribed for in the room.

A vote of thanks was then passed, with acclamation, to the chairman, and the meeting separated.

## WHEAL ROSE MINING COMPANY.

A meeting of shareholders was held at the mine, on Monday last, the 20th of September. J. G. PLOMER, Esq., in the chair.

The following statement of accounts, for the months of April, May, and June, was presented:—To amount of labour costs, for April, May, and June, 1847, 1668*l.* 19s. 3d.; merchants' bills, 561*l.* 13s.—2230*l.* 12s. 3d.—By amount of lead ores sold, 2002*l.* 9s. 9s.: leaving balance of 228*l.* 2s. 6d.; book in debt to end of March, 1847, 1527*l.* 15s. 5d., makes total debt due by adventurers of 1755*l.* 17s. 11d.—The accounts were allowed and passed; and the bankers' balances of 3563*l.* 3s. 1d., due to Messrs. Tweedy and Co., and 808*l.* 4s. 7s., due to Messrs. Vivian and Co., were allowed and recognised.—It was resolved, that all defaulters, who shall not pay their arrears of calls before Monday, the 27th day of September, be proceeded against by the purser in the next County Court; also, that the share of Capt. W. Martin be accepted at the price of 40*l.*, less the back calls due thereon; and that the purser hold the same share in trust for the adventurers, until the next account day, when the same shall be sold by public auction.—The purser, in his circular to the shareholders, states that "the loss on the three months' working was occasioned by a falling off in the price of the ores sold, although they were quite equal, if not superior, in value to the former." The report of the agent shows that, from the present prospects of the mine, we shall continue to work at a profit at the last prices of ore, and independent of any further discovery.

## SOUTH FRIENDSHIP WHEAL ANNE MINING COMPANY.

A special meeting of shareholders was held at the mine, on Tuesday, the 14th inst. FREDERICK S. THOMAS, Esq., in the chair.

Reports having been received from Mr. John Hitchins, Captains Gregory and Harris, recommending the extension of the 52 fm. level eastward, to the Wheal Anne sett, and the driving of the 28 fm. level south, to intersect the lode discovered in the lobby, it was resolved, that the operations of the mine be for the present confined to the objects proposed as above.

## WHEAL MARY ANN MINING COMPANY.

At a two-monthly meeting, held at the White Hart, Liskeard, on the 22d inst., the accounts were examined and passed, showing—balance from last account, 221*l.* 9s. 4d.; costs for June and July, 787*l.* 19s. 11d.; Harvey and Co., for steam-engine, 650*l.* = 1659*l.* 9s. 3d.—By ore sold, 882*l.* 10s. 6d.; leaving balance to next account, 836*l.* 18s. 9d.—A call of 30s. per share was made, payable forthwith.—The following report from Capt. Clymo was read:—"Barrat's shaft is sunk 1 fm. under the 30 fm. level; here the lode is 2 ft. wide, and worth 9*l.* per fm. The lode in the 30 fm. level, south of Barratt's shaft, is 1 ft. wide, and producing some good stones of lead. We have not yet holed the 15 fm. level cross-cut to Pollard's shaft, but are daily expecting to do so, when we shall again resume the driving of this level south on the lode. The stopes are looking well, and, from present appearance, we calculate to raise about 20 tons of ore per month; and, from the prospects of the mine altogether, we hope shortly to increase our returns. Pollard's shaft is sunk 12 fms. under the adit level."

## WHEAL TRELAWNEY MINING COMPANY.

At a two-monthly meeting, held at the Fountain Inn, Liskeard, on the 21st inst., the accounts were examined and passed, showing cost for May and June, 1922*l.* 12s. 10d.; balance from last account, 346*l.* 15s. 3d. = 2269*l.* 8s. 1d.—By ores sold, 2288*l.* 10s. 10d.; of John Hodge, balance for engine, 460*l.*: leaving balance against the mine of 445*l.* 17s. 3d.—The following report from Captain Bryant was read:—"Phillip's shaft is sunk 2 fms. below the 52 fm. level. The lode in the 52 fm. level north is 3 ft. wide, composed chiefly of cann, with spar, mundic, and lead, and worth 10*l.* per fm; in the same level south, the lode is worth 18*l.* per fm.; the lode is not so rich in the back as it is in the bottom of the level. The 42 fm. level south is still hard, and is worth 7*l.* per fm.; in this level north, which is improved, the lode is worth 14*l.* per fm; the stopes in the back of this level, taking them altogether, are not so good as I have seen them; but I hope the ground which we are now opening northward will make up for this deficiency. The 32 fm. level north is precisely as was last reported, and is worth 5*l.* per fm.; the stopes in the back of this level are much as usual, producing a fair quantity of ore. Trelawney's shaft is sunk about 18½ fms. under the 22 fm. level; the cross-cut east is extended about 3 fms. from the shaft in the 22 fm. level, in clean killas ground. Vivian's shaft is sunk 9 fms. under the 20 fm. level; but it is suspended at present, in consequence of the water. The lode in the 20 fm. level, north of this shaft, is 1 ft. wide, composed of splendid gossan and spar, with stones of lead; the winze, under this level, is sunk about 5 fms., where the lode is large, and looking well, although not rich; we are stoping the back near the boundary, and have the lode for 2 fms. long, worth 14*l.* per fm.; but I am doubtful of its continuance being in the gossan. I look forward to open ground at Vivian's shortly, that will pay well for working; and, having a good lode in the 52 fm. level (Phillip's shaft), hope soon to increase our returns, and think the time is not far distant, when the mine will pay good dividends."

BOTALLACK MINE.—At a meeting of adventurers, held at the mine, on Tuesday, the 14th inst., the following statement of accounts, for May and June, was submitted and passed:—Labour cost, 1198*l.* 13s. 8d.; merchants' bills, &c., 435*l.* 10s. 2d. = 1634*l.* 3s. 10d.—Balance in purser's hands last account, 188*l.* 7s.; copper sold, 307*l.* 12s. 3d. (less dues, 12*l.* 16s. 4d.); tin sold, 845*l.* 6s. 4d. (less dues, 35*l.* 4s. 5d.); sundries, 103*l.* 4s. 1d. = 1391*l.* 2s. 6d.—Balance against the adventurers, 243*l.* 1s. 4d.

TREVISKEY AND BARRIER.—Statement of accounts for June and July.—TREVISKEY: For ore sold May 27 (less 219*l.* 15s. 2d. for dues), 2417*l.* 7s. 3d.; for materials, 12*l.* 3s. 9d. = 2429*l.* 11s.—By labour cost, 664*l.* 17s. 8d.; tribute of ores, 160*l.* 19s. 6d.; merchants' bills, &c., 302*l.* 6s. 6d.; Tresavean adventurers' engine cost, &c., 107*l.* 1s. 4d.—showing profit of 1194*l.* 6s.; add in hand end of May, 26*l.* 12s. 10d.: leaves 71*l.* 9s. 7d. to be carried to next account.—*Report:* "We sampled last week 165 tons of ore, and expect to raise from the pitches 90 tons for Sept and Oct. Our last week's sampling having so far exceeded our calculation, I beg to remark, that it arose from the circumstance of a pare of tributers having discovered a branch of ore alongside of the lode."

BARRIER: For ore sold May 27 (less 21*l.* 7s. 3d. for dues), 277*l.* 14s. 11d.; adventurers' proportion of dividend, declared July 19, 1*l.* 8s. 8d. = 279*l.* 3s. 7d.—By labour cost, 77*l.* 11s. 8d.; tribute of ore, 99*l.* 9s. 3d.; merchants' bills, &c., 23*l.* 4s. 11d.; Tresavean adventurers' engine cost, &c., 34*l.* 1s.—showing profit of 44*l.* 16s. 9d.; add balance in hand end of May, 26*l.* 12s. 10d.: leaves 71*l.* 9s. 7d. to be carried to next account.—*Report:* "We sampled last week 165 tons of ore, and expect to raise from the pitches 90 tons for Sept and Oct. Our last week's sampling having so far exceeded our calculation, I beg to remark, that it arose from the circumstance of a pare of tributers having discovered a branch of ore alongside of the lode."

## ACCIDENTS.

*Great Polgooth Mine.*—W. Tremelling, whose death we noticed last week, had been all night at the capstan, and was proceeding to work a stem, when, on descending the ladder, he fell away, and was killed on the spot.

*Wheal Seton.*—As. W. Jewell was descending the mine, he fell away, and, striking his head, was killed on the spot.

*Merthyr.*—W. Thomas was killed by a fall of coal.

*Priestrigg Pit, Airdrie.*—T. Morrison, aged 15, was killed by the "tow," or rope, breaking—it appears he was ascending the shaft, in a full hutch of coals, when the rope broke, and he fell from the 9-feet seam to the splint coal, and was dreadfully mutilated; the "tow" had broken before, and was spliced with an iron clasp—Morrison's father was pit-head man.

*Titford, near Oldbury.*—T. Willetts, having finished his work, was proceeding to the bottom of the shaft, for the purpose of ascending, when a large piece of coal fell, and killed him.

*Brierley Hill.*—A poor fellow, named Hughes, was killed by a fall of coal in Mr. Darby's Colliery.

*Corbyn's Hall Colliery, Kingswinford.*—An explosion of foul air took place at one of the pits, severely burning J. Broome and J. Jones.

*Rowley Regis.*—As J. Moseley was working in Messrs. Chance's pit, at Hales Owen, a large piece of coal fell, and literally crushed him.

*Maesteg.*—While Mr. L. Roberts, a weigher in the employ of the Llynvi Company, was engaged at the pit's mouth, he lost his footing, and fell above 120 yards, by which he was instantly killed. It was strange that, on the day of the unfortunate occurrence, poor Roberts had determined on quitting his employ, and had remarked to his acquaintances, that it was his "last day."

*Rickershaw Colliery, near Leigh.*—An explosion of fire-damp took place at the works of Messrs. Ackers, Whitley, and Co., Rickershaw Collieries, near Leigh. Robert Tyrer, a collier, from Tyldesley, and William Hesford, a drawer, from Lowton, had just descended the Bolton-house Pit, and were commencing work; both were enveloped in the flames, and before they could be extricated Hesford expired. Tyrer was most dreadfully burnt, and his recovery is doubtful.

*Moor Lane Colliery, Kingswinford.*—R. Hughes was killed by a fall of coal.

*Fatal Accident at Percy Main Colliery.*—On Friday afternoon, two men, named Thomas Dobinson and Walter Murray, descended the pump-shaft of Percy Main Colliery, near North Shields, for the purpose of examining the pumping-gear which is used for the purpose of drawing the water from the bottom of the mine. This shaft forms part of the main shaft whence the coals are drawn from the pit, and is partitioned off, and only examined at stated periods, when the gear and pumps require it. The men who undertake this job are lowered down by means of a gin rope wrought with horses; and to facilitate the intercourse with the surface, a string leads up the shaft to a bell, upon which the signals are given to pull up, or lower, as the case may require. On the evening mentioned these two men descended the shaft to the bottom, and, having completed their work, gave the signal to pull up. The men were both in the loops formed in the chain, within which they placed each one leg and clung to the main rope. The horses went to their work and the rope ascended, when, suddenly, something seemed to check it; the horses put forth their strength and the rope came up without the men. It was broken, and a frightful calamity had happened. Immediate steps were taken to ascertain the fate of the unfortunate men, and they were afterwards discovered hanging at some distance from the bottom, still in the rope, which had got entangled with the scaffolding and the signal bell rope. They had fallen a considerable height and were both dead, having received severe injuries from striking the scaffolding in their descent. It is supposed that the shaft rope had fouled the bell rope in the ascent, as this circumstance led to the catastrophe.—*Newcastle Advertiser.*

DIED,—On the 18th inst., at Hanham, near Bristol, in the 38th year of his age, Mr. Louis Joseph Mause, for many years manager of the Spelter Works at that place, and formerly in connection with the Spelter Works at Penclawdd, Glamorganshire. He was much respected by numerous friends.

## WHEAL SAMSON GOLD, SILVER, AND COPPER MINE.

SIR,—When I first addressed you upon the subject of this very extraordinary lode, you expressed much interest in the discovery, and I promised to keep you possessed of the facts, as they should, from time to time, arise. The first operation on this lode was limited to driving a few fathoms upon the northern branch, at a depth of about 20 fms. from the surface; during the course of this driving, we were constantly intersecting bunches of ore, of the richest description, containing gold, silver, and copper, from which assays were given, bearing 35 ozs. of silver, 10 per cent. of copper, and 2 ozs. of gold to the ton. I have now a few barrels of ore in London, apparently more productive of gold, from which further assays will be made, and I hope to give you the result during the next week. The branch, from which these ores were returned, was not considered sufficiently large to encourage its prosecution, more especially, as a much larger lode, evidently forming a junction therewith, was subsequently discovered; it was, therefore, abandoned, and a level was commenced at about 20 fms. from the surface of the cliff, on the northern branch, and driven east, in order to arrive at the junction of the two lodes. We have now driven upon this northern branch about 40 fms.; the form of this lode has been exceedingly bold, steady, and well-defined; it is throughout from 4 ft. to 5 ft. wide, with walls exceedingly smooth, and it carries large stones of mundic, with gossan of the richest character, this north lode does not as yet carry ore, but its form is so perfect, that I have not a doubt but it is the main lode; and I believe it never yet was known in mining experience, that so bold and steady a lode did not make ore at a proper depth, and that the quality of the ore did not sympathise with the character of the country through which it passes, and the consequent regularity, in form, of the lode. I am desirous of courting attention to this lode, as it developes itself; it exists in a district always considered productive of rich silver ores, with portions of gold. In the time of Queen Anne, a royal mine was worked by the Crown near this spot; but, as no steady or large lode could be discovered, the quality of ore did not compensate for the cost at which it was obtained. We have now the desideratum of a fine lode, in connection with a branch of the richest ore, and I trust I may yet have to announce to you large returns of a similar quality.

*Tavistock, Sept.* 22. JOHN SPARGO.

THE COAL TRADE.—We have referred to the proceedings of the Newcastle coal deputation in another column: a meeting of coalowners has also taken place, at which it was resolved to raise the price of coals 2*l.* per cent. The Marquis of Londonderry immediately addressed a letter to H. Taylor, Esq. (the chairman), to do justice, as he states, to his own deliberate opinions, and that there may be hereafter no mistake about the matter. In it he distinctly declares himself hostile to all regulation or combination—the innumerable breaches of faith he has experienced making it clear that every concern should act for itself. His intentions are, therefore, to pursue the course best calculated to promote the welfare of his own increased and increasing establishments; he was not willing to increase the prices of the best article to the public, which only caused inland and inferior competition; the state of the markets are remunerating, and he would not be a party to the unpopular cry and consequences which a further rise of price would most assuredly cause.—These sentiments do the noble Marquis much credit. Grasping cupidity has ever marked the conduct of the great body of the coalowners of the north, and it is evident their present outcry arises only from the same bad feeling, and has no real foundation. Here the largest proprietor among them comes boldly forward, and tells them "prices *are* remunerative;" and it would be well for them to bear in mind, that we have now large supplies of coal in Staffordshire and other midland counties, and railway communication, to supply the metropolis with this necessary of life.

MINERAL WEALTH OF IRELAND.—Some remarkable mineralogical specimens have been discovered in the Rochfort cutting, on the line of the Cork and Bandon Railway, near Innishannon. One of these contains native lead, iron, copper, cobalt, manganese, and traces of a micaceous substance, resembling silver. The royalty of the adjacent land is reserved by the Duke of Devonshire, the right of entry to the mine resting with the company, who have purchased the fee between the limits of deviation; further exploration may, therefore, lead to some profitable results, as well to his grace, as to the railway shareholders.

DEVONSHIRE MINING.—A plate of silver, weighing 1140 ozs., has just been smelted and refined at the Combmartin and North Devon Smelting-Works, from silver-lead ores, the produce of the Combmartin Mines, unmixed with any other—consequently, the entire produce of Devon.

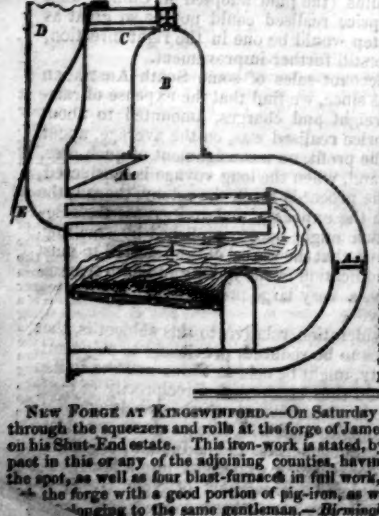
WHEAL ANDREW AND NANGILES.—At a meeting of adventurers, held on the mine, on Monday last, the following accounts were allowed, and the balance ordered to be divided and collected forthwith:—To costs for July and August, 1116*l.* 0s. 2d.—By ores sold, 549*l.* 18s. 10d.—Balance, 566*l.* 1s. 4d.

## THE LATE EXPLOSION ON BOARD THE *CRICKET*.

The adjourned inquest upon the bodies of the five persons who were killed by the explosion on board the *Cricket*, was resumed on Wednesday morning last, in the Board-room of St. Martin's Workhouse, before Mr. Bedford, the coroner for Westminster. Among the witnesses examined was a Mr. Fortwine, the author of a little work on the steam-engine in which fears are expressed of some accident happening to this description of engine; he proved himself, however, so totally unacquainted with practical working, that the jury declined receiving his evidence. The most important witness was Mr. T. Lloyd, chief inspector of machinery of the Royal Navy—he had made drawings of the boat and boilers as they appeared after the accident, which he exhibited to the jury; he said, as far as he could see, the materials and workmanship of the engines were good—there was nothing objectionable in the principle in point of danger. The dome plate of the boiler was 5-16ths of an inch in thickness, and the angle iron round the front of the boiler was 3 inches by half an inch, all the other angle iron is 2½ inches by ⅝ths of an inch, the rivets in the boiler are three-quarters of an inch in diameter. Assuming each boiler to be of the power of 16 horses, the total heating surface to each horse power is 14 8-10ths square feet. The area of the fire-grate is 55-100ths of a foot per horse power; the weight and spring valves operate jointly on the boiler, but separately as regards each other: he apprehended, if all these valves had been properly in operation, the steam could not have accumulated in the boiler to any extent. The construction of the boiler was dangerous to be used as a high pressure boiler; the whole of the pressure of the steam within the boiler is brought either directly or indirectly upon the flat plate in front: he did not believe that 66 lbs. on the inch would burst the boiler; and if it had not been intended to work the engine to above 66 lbs. per inch, such a weight ought not to have been put upon the levers: he supposed, if all the valves were prevented from acting, and the pressure was 60 lbs., and he calculated in 6 minutes it would increase to 90 lbs., in 10 minutes it would increase from 130 lbs. to 140 lbs., and in a quarter of an hour it would rise to 180 lbs. In testing the strength of some pieces of the boiler plates he found the tensile strength 17 tons to the inch, and the strength of the best Lowmoor plate iron was 22 to 23 tons—he did not attribute the explosion to the wear of the boiler; in an experiment to try the strength of the unexploded boiler, with hydraulic pressure, it stood 136 lbs. per square inch before it burst; and he considered, the pressure of steam which caused the explosion could not have been less, and if all the valves had been in operation the accident would not have occurred; he could not say whether the boilers of the *Ant* and *Bee* were 10 times the working strength, but if they were not stayed better than the *Cricket*, they were dangerous boilers. Several other witnesses were examined, from whose evidence it was confirmed that the engineer, Clark, was in the habit of tying the safety valves, and that most improper and unqualified persons had been intrusted with the care of the engines, and consequently with the safety of the boat, and lives of the passengers.

On Friday the inquest was resumed, when the evidence of the engineer (Heasman) was taken, also that of Mr. Meecham, Trotman (the boiler maker), and Mr. Joyce. At half past eight o'clock the jury retired to consider their verdict, and returned about 10, with the following:—"We find, that Thomas Shed, John Blunt, John Littleton, George Shute, and John Buckley, came to their deaths through the bursting of the boiler of the *Cricket* steam-boat, on the 27th August, 1847. We find a verdict of manslaughter against Henry Heasman, the engineer on that day. We consider Clark highly culpable, and unfit to hold the situation of engineer. We likewise consider Mr. Smith's conduct shamefully neglectful, in not properly investigating the complaint made against Clark."

Thus has ended, so far, the proceedings of the jury. We shall make some observations in our next on the evidence and the verdict; and, in the meantime, lay before our readers a section of the exploded boiler—showing the position of the two stays, the only ones in the boiler. A 1, represents the stay at the front, leading from the front plate, in a diagonal direction, towards the steam dome; this stay being formed out of 1¼-inch square bar-iron, flattened out at the end with an inch hole, and supported by a pin passing through two 2½-in. angle irons. A 2, represents the other stay, leading from the back of the boiler to the end of the flue, which communicates with the tubes. A, the furnace, about 3 feet in diameter. B, the steam dome, to which two safety-valves were affixed. C, steam pipe, leading from the box of the safety-valve to the funnel D. E, represents the spun-yarn, with which it is supposed the valves were made fast.




NEW FORGE AT KINGSWINFORD.—On Saturday week several balls were put through the squeezers and rolls at the forge of James Foster, Esq., just erected on his Shut-End estate. This iron-work is stated, by some, to be the most compact in this or any of the adjoining counties, having an abundance of coal on the spot, as well as four blast-furnaces in full work, which will, no doubt, further the forge with a good portion of pig-iron, as well as partially supply other furnaces belonging to the same gentleman.—*Birmingham Journal.*

The number of passengers who passed through the Tunnel in the week ending Sept. 19, 1847, was 1,284; amount of money, £72 17s. 6d.

THAMES TUNNEL COMPANY.

# Current Prices of Stocks, Shares, & Metals.

MINES.—The transactions in the mining share market have been very limited during the week, still we find a desire to purchase in some of the more favoured and dividend-paying mines. Business appears to have been confined to the following few mines—viz.: Condurrow, Herodsfoot, Trehane, Trelawney, Herodscombe, Wheal Franco, Plymouth Wh. Yeoland, East Crowndale, Stray Park, Devon and Courtenay, Wh. Ash, Treleigh.

Carn Brea dividend of 3*l.* per 1000th share, declared at the last meeting, became payable on the 20th inst.

The Treviskey and Barrier meeting, held on the 20th, declared a dividend of 10*l.* per 120th share, reserving a balance of 156*l.* on both mines in the purser's hands, exclusive of 2468*l.* ore bill, due for July ores, and 577 tons sampled last week from both mines, with all costs charged to the end of July. These shares may be considered, according to the present market price, one of, if not the cheapest, shares we know, being only a 2½ years' purchase, or 40 per cent. per annum.

Plymouth Wheal Yeoland shares have been in demand this week, and many shares have been done in the county at an advanced price.

Trebanes have continued in request throughout the week, although but few transactions have taken place.

Mendip Hills are also in demand; the furnaces for smelting the slag recently discovered will be completed in about six weeks, and we fully anticipate we shall be in a position, on or about the commencement of the New Year, to congratulate the shareholders on receipt of a dividend, which we think the pursuing a well-directed course of economy likely to afford.

Condurrows have been sought for, and several transactions effected. From our observations last, and the previous, week, this change we anticipated; for we know no positive cause for the sudden check then given, especially as the mine had improved at the period referred to. The lode in the shaft is now worth from 60*l.* to 70*l.* per fm. We always considered this mine a safe investment.

Several shares in Polsaith Consols have changed hands, and inquiries are being made for them. The reports speak highly of the locality for lead, as well as the discoveries already effected.

East Crowndales continue in demand, and business has been done at advanced prices.

A highly gratifying report, from the Bedford United Mines, appears in another column; although but little business has been transacted in them this week, we feel assured that the time is not far distant when they will be in great demand.

Favourable advices have also been received from West Wheal Maria; but we believe that inquiries as to price is all that has been done.

The six West Caradon and six Gonamena (256th) shares, advertised for sale at Devonport, on Monday last, under an order from the Court of Chancery, were not sold, in consequence of the bidding not reaching the reserved price—the highest offer for the former was 100*l.*, and 20*l.* for the latter.

The Wheal Martha meeting was held, on Wednesday last, for the purpose of considering the best means to be adopted for raising sufficient funds, and carrying out the operations recommended by the agents appointed to inspect and report on the mines. A resolution was passed, to the effect, that the holders of *preference* shares, upon which 1*l.* has been paid, to have an equal proportion of shares in the new company, in the event of its leasing the mines from the old company, with the 1*l.* considered paid. That when the new company shall make profits, they are to repay the original shareholders, at the rate of 10 per cent. from the *net* profits made. The arrangement appeared to give satisfaction, for about 1000 shares were subscribed for by those present.

In the foreign shares, there have been a few sales effected this week, chiefly in the Altens; some Bolanos, and Mexican, and South American shares have also been done.

Despatches received from the Alten Mining Company furnish most encouraging accounts, especially from the Raipas Mine, where improvement in both quantity and quality has been the result.

The Royal West Indian Mail steamer *Thames*, which arrived at Southampton, on Tuesday, the 21st, brings 660 ounces of silver, 3371 dollars, and a general cargo of merchandise.

RAILWAYS.—In the early part of the week the market showed symptoms of some revival; and, should some amelioration take place in the currency affairs of the country, shares in established lines would very soon assume a very different complexion to what they do at present. Prices rallied considerably, and business was rather more brisk; and, at the close of the week, things continued steady, though rather less business was done.

MEETINGS.—AIRDRIE AND BATHGATE: annual. It appeared from the report, that no material alteration had taken place in the affairs of the company since the last meeting. A proprietor gave notice, that he should at the next meeting move to increase the number of directors from 9 to 12.—WILSONTOWN, MORNINGSIDE, AND COLTNESS: special. To consider amalgamation with Edinburgh and Glasgow—agreed to.

HULL, THURSDAY.—The present apathetic state of the share trade, leaves us little to write about. Should no further failures of importance occur, we think symptoms of a better state of things are discernable in the monetary horizon—whether for permanence, or not, many, at present uncertain, causes must determine. At a meeting, held yesterday, it was determined to co-operate with the Liverpool movement, for the mitigation of railway calls during a period of more than ordinary pressure on the mercantile and industrial interests of the country—evidenced by the embarrassment of more than one first-rate house of previously undoubted responsibility.

## LITERARY NOTICE.

*Compendium of the Improvements effected in Electric Telegraphs by Messrs. Brett and Little, with a description of their Patent Electric Telegraphic Converser, and the Opinions of the Public Press on its merits.* London: Adams, Fleet-street, 1847.

The electric telegraph has now become indispensable to the successful working out of the railway system, and it is, necessarily, of the utmost importance that the machinery by which its powers are put in action, should be simple and effectual, enabling the operator to take advantage of all its capabilities, and to render them subservient to the convenience and safety of the public. Among all the improvements which have been made in the electric telegraph, Messrs. Brett and Little have undoubtedly effected more than any of their predecessors; and the pamphlet before us contains a complete description of all their apparatus, and its mode of action. Having in a former Number given a tolerably clear description of their improvements, with diagrams, we now content ourselves with laying before our readers the following extract from the introduction to the work:—

"Among the numerous discoveries and inventions which have marked the present age, although many have taken place of considerable national importance, there are, perhaps, none which in their results will have so revolutionised society, and have effected such extraordinary changes in the track of civilisation, in the condition, social, moral, and political, of the people—as the establishment of the railway system, and the discoveries of the properties and powers of galvanic electricity, as applied to telegraphic purposes. The latter, indeed, is to the former, what mind is to matter; for never could the full powers and capabilities of railway transit have been properly known or appreciated, without some telegraphic agent, by which instantaneous communication could be effected from station to station, or even from terminus to terminus, in case of accident, or other circumstance requiring the instant transmission of important intelligence. The only agent science has yet discovered to the human mind, by which this desirable end could have been obtained, is galvanic electricity; and already are its gossamer pathes stretched for some hundreds of miles on our railways, along which the subtile fluid pursues its rapid and unwearied course, giving instant token to distant stations of the times of starting and arrival of trains, interchanging the results of monetary and commercial intercourse between the metropolis and all the great marts of trade, shipping, and manufactures, and conveying every intelligence to the most remote parts of the kingdom in less time than it takes to write a sentence. With an agent at command from which such wondrous results take place, it is at once evident that the means employed for its transmission should be of the most perfect kind that can possibly be obtained—that, above all, complexity of arrangement should be avoided. No human inventions are complete at first; and, while the palm of merit is most deservedly due to those pioneers in science whose mental and physical exertions first introduce to public notice, public use, and public benefit, any new discovery, it does not follow that we are to be bound to the crude and imperfect means by which certain results are in the first instance obtained; but the arena is then open, and it is for the national benefit, that the inventive genius of man should be cherished and encouraged; through which alone has emanated all the great mechanical improvements for which this country stands so proudly pre-eminent; always, however, is it the case that in the introduction of any new invention, numerous difficulties and obstacles to the advancement have to be overcome—the clashing of individual interests, settled connections, old prejudices, and the influence of powerful companies, have to be contended with; and yet, in spite of all these, if a discovery is based on sound principles, and carried out with spirit and perseverance, it will ride out the gale of opposition, and enter the harbour of success in triumph. The patentees have, in the aggregate, produced an apparatus which may constantly be depended upon, simple in construction, facile in operation, and most economical as to cost. It is now open for the inspection of the scientific public, and the proprietors confidently leave it to stand or fall on its own merits. Patents have been secured for all Europe and America; and, as it is the anxious desire of the patentees to see the full development of the principle carried out, and its vast superiority over others proved, they are prepared to allow its use by railway companies, on the most liberal terms; not restricting its application merely to railway purposes, but leaving them free to employ the telegraph in whatever and under any circumstances which the directors may think conducive to the company's interest."

A full and clear description of the entire of the apparatus employed, then follows in detail, giving, in separate paragraphs, the battery, the instrument, connecting motions, bell-machinery, insulators, conductors of atmospheric electricity, &c., and concludes with the numerously expressed opinions of the public press on its merits, given at great length.

## LATEST CURRENT PRICES OF METALS.

*LONDON, SEPTEMBER* 24, 1847.

| | £ s. | £ s. d. | | £ s. | £ s. d. |
|---|---|---|---|---|---|
| IRON—Bar a..Wales...ton | 0 0— | 9 15 0 | COPPER—Ord. bottoms .. | 0 0— | 0 0 12 |
| ..London .. | 0 0— | 9 15 0 | YELLOW METAL SHEATHING | 0 0— | 0 0 9½ |
| Nail rods .. „ .... | 0 0— | 10 15 0 | TIN—Cum. blocks g...cwt. | 0 0— | 4 5 0 |
| Hoop (Staf.) „ .... | 11 15— | 12 0 0 | „ bars ..... | 0 0— | 4 6 0 |
| Sheet „ .... | 0 0— | 13 0 0 | Refined ..... | 0 0— | 4 10 0 |
| Bars „ .... | 0 0— | 11 5 0 | Straits h ..... | 0 0— | 4 2 6 |
| Welsh cold-blast foundry pig .. | 4 10— | 5 5 0 | Banca ..... | 0 0— | 4 4 0 |
| Scotch pig b, Clyde | 3 5— | 3 7 0 | TIN-PLATES—Ch., IC i, box | 1 0— | 1 10 0 |
| Rails, average .... | 5 10— | 9 0 0 | „ IX ... | 1 14— | 1 16 0 |
| Chairs ..... | 5 15— | 6 0 0 | Coke, IC ..... | 0 0— | 1 5 0 |
| Russian, CCND c.. | 0 0— | —— | „ IX ... ... | 0 0— | 1 11 0 |
| „ PSI ... | 0 0— | —— | LEAD—Sheet k ..... ton | 0 0—19 | 10 0 |
| „ Gouriew | 0 0— | —— | Pig, refined ..... | 0 3—20 | 5 0 |
| „ Archangel | 0 0—13 | 10 0 | „ common .... | 0 0—18 | 10 0 |
| Swedish d, on the spot | 11 0—11 | 5 0 | „ Spanish, in bd. | 0 0—18 | 0 0 |
| „ Steel, fagt. | 0 0—16 | 5 0 | Red ..... | 0 0—19 | 10 0 |
| „ „ kegs e | 0 0—14 | 15 0 | Dry White ..... | 0 0—24 | 0 0 |
| COPPER—Tile f ..... | 0 0—97 | 0 0 | Shot (Patent) ..... | 0 0—21 | 0 0 |
| Tough cake ..... | 0 0—98 | 0 0 | SPELTER—(Cake) l on spot | 0 0—18 | 15 0 |
| Best selected ..... | 0 0 101 | 0 0 | „ „ for arrival | 0 0—18 | 15 0 |
| Ordin. sheets, *b*... | 0 0— | 0 0 11 | ZINC—(Sheet) m ex export.* | 0 0— | 27 0 0 |
| | | | QUICKSILVER n ..... *lb.* | 0 0— | 0 4 6 |

*a* Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

IRON.—Welsh and Staffordshire are still in good demand, at quotations; Scotch pigs are dull; in Swedish and Russian, nothing doing.—COPPER AND LEAD are steady, and in good request.—TIN.—English is quiet; in foreign, several sales have been made this week, at quotations.—TIN-PLATES heavy—very little export demand.—SPELTER has been neglected this week; no sales of consequence has been made, the price is, therefore, nominal.

GLASGOW PIG-IRON TRADE, SEPT. 23.—Pig-iron continues as it was at date of our last advices—very dull; the sales that have been made were at a slight decline on last week's prices. The price to-day is nominal, and may be quoted at 65s. for mixed Nos.

## COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 17—Charlotte Main 18 6—Chester Main 17 6—Davison's West Hartley 18—Dean's Primrose 17—Delaval Hartley 17 6—Hasting's Hartley 18—Holywell Main 18 6—Newcastle Hartley 17—Ord's Redheugh 17—Ravensworth's Pelaw 16 6—Ravensworth's West Hartley 18—Tanfield Moor 18 9—West Hartley 18—Wall's End Acorn Close 19 6—Barnard 19—Bewicke and Co. 19 6—Bensham 18 6—Bell and Brown 19 6—Heworth 18 6—Hedley's 19 6—Killingworth 19 6—Eden Main 20—Bell 20 3—Braddyll's Hetton 20 9—Hetton 21—Lambton 20 6—Russell's Hetton 20 6—Richmond 19 3—Stewart's 21—High Thornley 18 9—Heugh Hall 19 6—Kelloe 20 6—Thornley 19 3—Adelaide Tees 20 3—Tees 20 9—Derwentwater Hartley 17 6—James and Aubrey Stone Coal 30—Llangennech 25—Sidney's Hartley 18.—Ships at market, 117.

WEDNESDAY.—Adair's Main 17—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Charlotte Main 18—Carr's Hartley 17 6—Chester Main 17—Clavering's Tanfield 15 6—Davison's West Hartley 17 6—Hasting's Hartley 17 6—Holywell Main 18 6—North Percy Hartley 17 6—Original Tanfield 15 6—Ord's Redheugh 17—Ravensworth's Pelaw 16 3—South Peareth 16 9—Stewart's Hartley 17—Tanfield Moor 18 6—Townley 17 6—West Hartley 17 6—Wylam 17 9—Wall's End Barnard's 18—Bewicke and Co. 18 9—Clennell 17 3—Clarke and Co. 17 3—Gosforth 18 9—Heworth 18 6—Hedworth 17 3—Killingworth 18 9—Willington 18 3—Wharncliffe 18 9—Eden Main 20—Belmont 19 3—Braddyll's Hetton 20 6—Crawford 17—East Hetton 18 3—Haswell 21—Hetton 20 9—Lambton 20 6—Lumley 18 9—Russell's Hetton 20 3—Richmond 18 9—Shotton 20—Stewart's 21—Whitwell 18 9—Hartlepool 20 9—Hudson's Hartlepool 19 6—Heugh Hall 19—Adelaide Tees 20 3—Denison 19—Gordon 17 3—South Durham 20—Tees 20 6—West Hetton 19—Whitworth 17—Cowpen Hartley 17 6—West Hartley Netherton 17—Sidney's Hartley 17 6.—Ships at market, 212; sold, 123.

FRIDAY.—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Carr's Hartley 17 6—Davison's West Hartley 17 6—Hasting's Hartley 17 6—Holywell Main 18 6—North Percy Hartley 17 6—Original Tanfield 15 6—Ord's Redheugh 17—South Peareth 16 9—Tanfield Moor 18 6—Thirslington Main 18 6—West Hartley 17 6—Wall's End Barnard 18—Bell and Brown 18 6—Clennell 16 9—Clarke and Co. 16 9—Gosforth 18 6—Northumberland 18 3—Riddle's 18 3—Eden Main 20—Belmont 19 3—Braddyll's Hetton 20 6—Crawford 16 9—East Hetton 18 6—Haswell 21—Hetton 20 9—Harraton Main 15 6—Lambton 20 6—Shotton 19 9—Stewart's 21—Hudson's Hartlepool 19 6—High Thornley 18—Thornley 18 6—Adelaide Tees 20 3—Seymour Tees 19 6—West Hetton 19 3—Brancepeth 16 6—Howard's West Hartley Netherton 17 6—Sidney's Hartley 17 6—Killingworth 18 6.—Ships at market, 100; sold, 64; unsold, 36.

## RAILWAY TRAFFIC RETURNS.

| Name of Railway. | Lgth. Rway. | Present actual cost. | Price per share | Last Div. | *Traffic Returns.* 1847 | 1846 |
|---|---|---|---|---|---|---|
| Arbroath and Forfar ..... | 15 | £179,930 | 26 | 3 *p. c.* | £261 | £183 |
| Chester and Birkenhead ..... | 15 | 658,293 | 39¼ | 2½ | 824 | 777 |
| Dublin and Drogheda ..... | 35 | 689,248 | 53 | 3½ | 862 | 933 |
| Dublin and Kingstown ..... | 7½ | 473,282 | — | 9 | 869 | 1154 |
| Dundee, Perth, and Aberdeen... | 47 | 285,745 | 35 | 6 | 921 | 347 |
| East Lancashire ..... | 30½ | 2,207,490 | 16½ | — | 1066 | — |
| Eastern Counties ..... | 126 | 6,513,026 | 17½ | 7 | 12176 | 10130 |
| Eastern Union ..... | 44 | 531,021 | 60 | — | 1261 | 586 |
| Edinburgh and Glasgow ..... | 48 | 2,275,435 | 52½ | 6 | 4685 | 4508 |
| Glasgow, Paisley, and Ayr ..... | 60½ | 1,567,281 | 121 | 7 | 2779 | 5505 |
| Glasgow, Paisley, & Greenock.... | 22 | 835,918 | 18½ | 2 | 1329 | 1210 |
| Gt. Southern & Western, Ireland | 110½ | 1,343,718 | 28 | — | 1737 | — |
| Great Western ..... | 241 | 9,714,939 | 102 | 8 | 21041 | 20418 |
| Kendal and Windermere ..... | 10½ | 147,001 | 24½ | — | 203 | — |
| Lancaster and Carlisle ..... | 70 | 1,309,913 | 58 | — | 1643 | — |
| Lancashire and Yorkshire ..... | 92½ | 6,807,314 | 87½ | 7 | 11323 | 11819 |
| London and North Western .... | 382 | 18,042,004 | 160½ | 10 | 45163 | 44352 |
| London and Blackwall..... | 4 | 1,102,717 | 5½ | 1½ | 1055 | 1297 |
| London, Brighton, & South Coast | 137½ | 5,109,667 | 45¼ | 7 | 11390 | 11000 |
| London and South-Western .... | 186½ | 5,886,139 | 58½ | 9 | 9888 | 8307 |
| Londonderry and Enniskillen .... | 14½ | —— | 24½ | — | 105 | — |
| Manchester & Leeds ..... | 147½ | 5,036,391 | 96 | 5½ | — | 8104 |
| Manchester, Sheffield, & Lincolnsh. | 99½ | 1,678,108 | 69 | 5 | 2906 | 2919 |
| Maryport and Carlisle ..... | 28 | 414,895 | — | — | 673 | 722 |
| Midland Company ..... | 382 | 7,862,274 | 116 | 7 | 26079 | 23217 |
| Newcastle and Carlisle ..... | 65 | 1,164,080 | 118 | 5 | 2346 | 2229 |
| Norfolk ..... | 70½ | 1,199,689 | 103 | 7 | 2366 | 1755 |
| North British ..... | 78 | 1,459,958 | 26½ | — | 2837 | 2004 |
| Shrewsbury and Chester ..... | 17 | 591,158 | 21½ | — | 587 | — |
| South Devon ..... | 29 | 1,061,283 | 28 | 5 | 1029 | 608 |
| South-Eastern ..... | 157½ | 5,888,411 | 34½ | 3½ | 11361 | 11505 |
| Taff Vale ..... | 38 | 888,411 | — | 6½ | 1714 | 1465 |
| Ulster ..... | 25 | 358,353 | 52 | 5½ | 876 | 785 |
| Whitehaven Junction ..... | 12 | 91,274 | — | — | 249 | — |
| York, Newcastle, & Berwick.... | 236½ | 3,663,102 | 34½ | 9 | 12430 | 8282 |
| York and North Midland ..... | 196 | 2,483,256 | 75 | 10 | 10110 | 7748 |
| FOREIGN RAILWAYS. | | | | | | |
| Amiens to Abbeville ..... | 28 | 573,338 | — | 4 | 706 | — |
| Dutch Rhenish ..... | 57½ | —— | 2½ | — | 1305 | 1476 |
| Northern of France ..... | 208½ | 2,000,000 | 10½ | 4 | 15710 | 14720 |
| Orleans to Tours ..... | 72 | 600,000 | — | 4 | 3563 | 3850 |
| Paris and Orleans..... | 82 | 2,011,720 | 48 | 12½ | 8784 | 8734 |
| Paris and Rouen ..... | 85 | 2,082,916 | 35 | 9½ | 8784 | 8194 |
| Rouen and Havre ..... | 59½ | —— | 21½ | 4 | 3390 | — |
| Strasburgh and Basle (monthly) | 38 | —— | 8 | 1½ | 9960 | 10612 |

Total earnings for last week, £207,463, being an increase of £36,045 over last year.

## NEW PATENTS.

J. Dickenson, 65, Old Bailey, for improvements in the manufacture of paper.

H. Newton, Litton-hill, Bakewell, Derby, cotton-spinner, for improvements in spinning and doubling cotton, and other fibrous substances.

A. H. Johnson, Gresham-street, London, assayer, for improvements in refining silver-lead, by effecting a saving in one of the materials used.

C. Hancock, Brompton, Middlesex, gent., for improvements in the preparation of gutta percha, and in the application thereof alone, and in combination with other materials, to various manufacturing purposes.

G. Bell, Dublin, merchant, for improvements in gas tar, by means of which improvements it may be used as a substitute for oil paint, and which he intends to designate "Patent Mineral Paint."—*Mechanics' Magazine.*

RAILWAY LINES.—We find the following remarks in the *Bedford Mercury*—"Railway shareholders seem inclined to check their solicitors in obtaining Bills for new lines of railway connected with those already established—totally forgetting that to preserve the value of existing trunk lines, they must have a stream of traffic brought to them by branches, which, if not turned to those trunks, may be stretched from one to the other, till a number of rival lines from place to place may make a new trunk line, and thus divert the present traffic on main lines, to the injury of the shareholders. Ordinary shareholders are not competent judges of the vitality of railway prosperity. In looking at the expenditure of their funds, they are more captivated with this year's return than future profits, which give permanent value to a railway as an investment, and make their shares of real value."

BRISTOL AND EXETER RAILWAY.—A correspondent, who forwards his name and address, says:—"I have much pleasure in assuring you, that negociations for the restoration of a good feeling between this and the Great Western Company have been commenced, and which, it is hoped, will terminate to the interest of both, and to the advantage of the public at large."—*Railway Record.*

DISCOVERY OF PLATINUM IN FRANCE.—M. Gueymard has just informed the General Council of the Isère, that he has discovered a vein of platinum in the metamorphic district of the valley of the Drac, which he hopes to work with advantage. Hitherto this precious metal, which combines with incomparable hardness the lustre of gold and silver, has only been met with in the Ural Mountains, and its scarcity has always rendered the price very exorbitant.—*Paris paper.*

*Runcorn—Death from Explosion of Gunpowder.*—On Tuesday evening last, Mr. I. S. Clarke, deputy coroner, held an inquest at Wardleworth, Rochdale, on the body of James Chadwick, miner and sinker, aged 22 years. Deceased and another man, named Urmson, had been engaged in Syke Colliery, near the water-works, blasting a rock with gunpowder, when an explosion took place. Both men were seriously injured, and Chadwick died on Tuesday, leaving a wife and two children. Verdict, "Accidental Death." *Liverpool Mer.*

## PRICES OF MINING SHARES.

### BRITISH MINES.

| Shares. | Company. | Paid. | Price. |
|---|---|---|---|
| 1000 | Abergwesain | 7 | 12 |
| 512 | Albert Consols | 1 | 2½ |
| 4024 | Alfred Consols | 4½ | 30 |
| 256 | Alternum Consols | 2 | 19 |
| 225 | Andrew and Nangilles | 23½ | 11½ |
| 10000 | Ayrshire Iron Company | 8 | 4½ |
| 1024 | Balleswidden | 9 | 16 |
| 128 | Balnoon Consols | 25 | 25 |
| 40000 | Banwen Iron Co. | 3 | — |
| 1000 | Barristown | 4½ | 10 |
| 4000 | Bedford | 2½ | 4 |
| 128 | Besore Lead Mine | 14 | 10 |
| 315 | Birch Tor Tin Mine | 24½ | 4½ |
| 9000 | Blaenavon | 50 | 20 |
| 100 | Botallack | 175 | 140 |
| 120 | Brewer | 8 | 7 |
| 40000 | British Iron, New, regis. | 10 | 15½ |
| — | Ditto ditto, scrip | 10 | 19 |
| 128 | Budnick Consols | 52½ | 40 |
| 128 | Burthy | 20 | 21 |
| 100 | Bwich Cwmorth | 20 | — |
| 128 | Calbestock | 17 | 30 |
| 1000 | Callington | 19 | 40–5 |
| 20000 | Cameron's Steam Coal | 4 | 3½–¾ |
| 256 | Caradon Copper Mine | 9½ | 1 |
| 256 | Caradon Mines | 22½ | 17 |
| 256 | Caradon United | 24 | 5 |
| 256 | Caradon Wh. Hooper | 20 | 4 |
| 1000 | Carn Brea | 15 | 102½ |
| 2048 | Carmarthen Consols | 2 | 3 |
| 2048 | Cascade | 1 | 2 |
| 112 | Charlestown | 200 | 100 |
| 166 | Cleveland | 9 | 10 |
| 512 | Coatlithe Hill | ¼ | 1–1½ |
| 1900 | Combmartin | 7½ | 3 |
| 500 | Comblawn | 5 | 4½ |
| 128 | Comfort | 45 | 100 |
| 256 | Condurrow | 20 | 33 |
| 9560 | Cook's Kitchen | 14 | 5½ |
| 1000 | Coombe Valley Quarry | 1½ | 2 |
| 1000 | Copper Bottom | 1 | 5 |
| 1024 | Cosheen | 4½ | 20 |
| 240 | Craddock Moor | 15½ | 15 |
| 128 | Creeg Braws | 120 | 100 |
| 500 | Cubert Mine | 12½ | 17½ |
| 2048 | Dartmoor Consols | 2 | 3 |
| 7100 | Derwent | 8½ | 5 |
| 1024 | Devon&CourtenayCon. | 7 | 2 |
| 1024 | Devon Great Consols | 1 | 250 |
| 1000 | Dhurode | 2 | 5 |
| 186 | Dolcoath | 30 | 50 |
| 2560 | Drake Walls | 4 | 4 |
| 40000 | Durham County Coal | 45 | 9 |
| 8000 | Dyfngwm | 10 | 12½ |
| 256 | East Alvenney | 6 | 26 |
| 112 | East Caradon | 42 | 42 |
| 2048 | East Crowndale | 4½ | 4 |
| 512 | East Combe Silver-Lead | 6½ | 6½ |
| 128 | East Pool | 5 | 50 |
| 100 | East Relistian | 22 | 40 |
| 9000 | East Tamar Consols | 1½ | 2 |
| — | East Wheal Albert | 1 | 3 |
| 94 | East Wheal Crofty | 280 | 125 |
| 256 | East Wheal Fortune | 2 | 3 |
| 128 | East Wheal Rose | 50 | 1300 |
| 2048 | East Wh. Rough Tor | ½ | 2 |
| — | East of Scotland Iron Co. | 2½ | 1 |
| 123 | East Wheal Seton | 14 | 20 |
| 256 | Elborough | 1½ | 2 |
| 256 | Exmoor Wh. Eliza | 3½ | 10 |
| 512 | Fowey Consols | 40 | 45 |
| 6400 | Gadair | 2 | 2 |
| 20000 | Galvanised Iron Co. | 10 | 9½ |
| 10000 | Gen. Mining Co. for Irel. | 2 | 1½ |
| 2048 | Georgia Tin Mines | 1½ | 1½ |
| 256 | Gonaunena | 31½ | 45 |
| 128 | Goonvrea | 4 | 1½ |
| 244 | Grambler & St. Aubyn | — | 12 |
| 100 | Great Consols | 1000 | 400 |
| 256 | Great Callestick Moors | 23 | 25 |
| 2560 | Great Michell Consols | 1½ | 3 |
| 256 | Great Resugga Moor | 5 | 15 |
| 512 | Gt. Wh. Rough Tor Con. | 6½ | 36 |
| 1500 | Great South Tolgus | 2 | 2 |
| 100 | Grogwinion | 5 | — |
| 1000 | Gunnis Lake | 1½ | 3 |
| 256 | Gwinear Consols | 5 | 15 |
| 1000 | Harrowbarrow Old Mine | 8½ | 2 |
| 6000 | Helgnston Down Con. | ½ | 2½ |
| 256 | Herodscombe | 2½ | 10 |
| 256 | Herodsfoot | 14 | 20 |
| 40000 | Hibernian | 12½ | 1½ |
| 239 | Hobb's Hill | 6 | 3 |
| 1000 | Holmbush | 19 | 12 |
| 827 | Kirkendbrightshire | 5½ | 7 |
| 2048 | Lamherooe Wh. Maria | 10 | 3 |
| 2048 | Lanivet Consols | 4 | 2½ |
| 128 | Lelant Consols | 90 | 60 |
| 160 | Levant | — | 90 |
| 1000 | Lewis | 15 | 6½ |
| 1000 | Llwyn Malees | 5 | — |
| 3600 | Llynvi Iron | 50 | 60–65 |
| 256 | Lostwithiel Consols | 12 | 12 |
| 128 | Ludcott | 3 | 3 |
| 6000 | Marke Valley | 10 | 3 |
| 5000 | Mendip Hills | 2½ | 1½ |
| 5000 | Merionethshire Slate & Slate Slab Co. | 1½ | 2½–2½ |
| 20000 | Mining Co. of Ireland | 7 | 8 |
| 256 | New East Crowndale | 3½ | 3½ |
| 128 | North Fowey Consols | 30 | 30 |
| 100 | North Pool | 45 | 370 |
| 70 | North Roskear | 10½ | 300 |
| 512 | North Treburget | 2 | 3 |
| 100 | North United | 72 | 15 |
| 256 | North Wh. Abraham | ½ | 12 |
| 262 | North Wh. Leisure | 1½ | 3½ |
| 128 | North Wh. Providence | 2½ | 6 |
| 15000 | Northern Coal Co. | 23 | 2 |
| 1200 | Old Delabole Slate Co. | 25 | 50 |
| 128 | Par Consols | 900 | 1000 |
| 256 | Penhallow Moor | 15 | 4 |
| 4000 | Pennant | 1½ | 1½ |
| 100 | Penrhiw | 30 | 65 |
| 1280 | Perran St. George Un. | 13 | 20 |
| 128 | Perran Wh. Virgin | 9½ | 15 |
| 512 | Plymouth Wh. Yeoland | 4½ | 18 |
| 256 | Polsaith Consols | 3 | 5½ |
| 112 | Providence Mines | 35 | 45 |
| 256 | Redruth Consols | 3 | 2 |
| 40000 | Rhymney Iron | 50 | 30 |
| 10000 | Ditto New | 7 | 6½ |
| 256 | Rose Consols | 10 | 2 |
| 1000 | Rosewall Hill | 1 | 5 |
| 256 | Rosewarva Mines | — | 12 |
| — | Shotts Iron Company | 50 | 60 |
| 2500 | Silver Valley | 5 | 2 |
| 1024 | South Callington | 5 | 3 |
| 128 | South Caradon | 10 | 450 |

### BRITISH MINES—*continued.*

| Shares. | Company. | Paid. | Price. |
|---|---|---|---|
| 2000 | South Dolcoath | 2 | 1 |
| 256 | Sth. Friendsh. Wh. Ann | 16 | 25 |
| 300 | South Harvannah | 10 | 25 |
| 9000 | South Tamar | ½ | ¼ |
| 256 | South Tolgus | 24 | 25 |
| 800 | South Towan | 10 | 1½ |
| 256 | South Treluwney | 15½ | 7 |
| 128 | South Yeoland | 16½ | 20 |
| 128 | South Wheal Basset | 110 | 75 |
| 124 | South Wh. Francis | 160 | 210 |
| 256 | South Wh. Hope | — | 5 |
| 1000 | South Wh. Maria | 2½ | 2 |
| 256 | South Wheal Rose | 11½ | 1 |
| 10000 | Southern&Western, Irish | 2 | 4–5 |
| 280 | Spearne Moor | 30 | 40 |
| 256 | St. Austell Consols | 9 | 10 |
| 94 | St. Ives Consols | — | 320 |
| 128 | St. Michael Penkivel | 5 | 10½ |
| 1000 | Stray Park | 43 | 25½ |
| 9600 | Tamar Consols | 5 | 5½ |
| 1024 | Tavy Consols | 3½ | 4 |
| 6000 | Tincroft | 7 | 8 |
| 1000 | Tin Vale Consols | 2 | 2½ |
| 256 | Ting Tang | 15 | 10 |
| 128 | Tokenbury | 143½ | 15 |
| 256 | Trehane | 2 | 27 |
| 5000 | Treleigh Consols | 6 | 3½ |
| 2000 | Trenance | 2 | 20 |
| 96 | Tresavean | 10 | 250 |
| 120 | Trethellan | 5 | 16 |
| 120 | Treviskey and Barrier | 130 | 155 |
| 268 | Trevean | 1 | 10 |
| 256 | Trewollack | 20 | — |
| 128 | Trewollard | 12 | 26½ |
| 100 | United Mines | 300 | 350 |
| 256 | Wellington Mines | 15 | 30 |
| 128 | West Basset | 45 | 22 |
| 256 | West Caradon | 20 | 140 |
| 128 | West Cargoll | 2 | 12 |
| 512 | West Fowey Consols | 40 | 15 |
| 256 | West Grambler | 7 | 8 |
| 256 | West Providence | 1 | 17½ |
| 200 | West Seton | 40 | 130 |
| — | West of Scotland Iron Co. | 210 | 212 |
| 120 | West Trethellan | 5 | 35 |
| 256 | West United Hills | 2½ | 4 |
| 256 | West Wh. Friendship | 7½ | 8 |
| 3845 | West Wheal Jewel | 11 | 1½ |
| 2560 | West Wh. Maria | 2½ | 1 |
| 2560 | West Wheal Rough Tor | ¼ | 2 |
| 256 | West Wheal Shepherd | 5 | 2½ |
| 256 | West Wheal Tolgus | 21½ | 2½ |
| 256 | West Wheal Treasury | 19 | 10 |
| 5200 | Wicklow Copper | 5 | 12 |
| 184 | Wheal Adams | 41 | 10 |
| 1000 | Wheal Agar | — | 10 |
| 256 | Wheal Albert | 10 | 8 |
| 128 | Wheal Acland | 13 | 2 |
| 256 | Wheal Allen | 2 | 5 |
| 237 | Wheal Anderton | 16½ | 26 |
| 128 | Wheal Ann | — | 50½ |
| 512 | Wheal Ann, Bridford | 1 | 2 |
| 512 | Wheal Anna Maria | — | 5 |
| 128 | Wheal Arvose | 3½ | 5 |
| 1024 | Wheal Ash | 3 | 12 |
| 120 | Wheal Bal | 5½ | 20 |
| 2560 | Wheal Barbara | 1½ | 4 |
| 256 | Wheal Benny | 6½ | 3 |
| 256 | Wheal Blencowe | 8 | 5 |
| 256 | Wheal Bucketts | 20 | 18 |
| 256 | Wheal Byon Consols | ½ | ½ |
| 256 | Wheal Calstock | 3 | 4 |
| 136 | Wheal Clifford | 190 | 190 |
| 128 | Wheal Courtenay | — | 20 |
| 6000 | Wheal Curtis | 2 | 2–2½ |
| 256 | Wheal Dyke | 12 | 13 |
| 256 | Wheal Fortescue | 6½ | 8 |
| 512 | Wheal Fortune Consols | 3½ | 6½ |
| 2048 | Wheal Frederick | 2 | 2 |
| 388 | Wheal Franco | 27 | 32 |
| 1024 | Wheal Grace | 3 | 2½ |
| 128 | Wheal Harriet | 45 | 50 |
| 256 | Wheal Jane | 21 | 15 |
| 256 | Wheal Louisa | 8½ | 8 |
| 112 | Wheal Margaret | 79 | 250 |
| 256 | Wheal Maria (Hayle) | 24 | 10 |
| 4000 | Wheal Martha Consols | 5 | — |
| 512 | Wheal Mary Ann | 5 | 20 |
| 256 | Wheal Mary Consols | 38 | 25 |
| 256 | Wheal Mary (Lanivet) | 6½ | 4 |
| 256 | Wheal Maude | 1½ | 1½ |
| 210 | Wheal Prospect | 4 | 7 |
| 120 | Wheal Reeth | 27 | 30 |
| 128 | Wheal Rose | 60 | 45 |
| 2048 | Wheal Samson | — | 20 |
| 99 | Wheal Seton | 214 | 1100 |
| 256 | Wheal Sisters | 29½ | 35 |
| 256 | Wheal Sophia | 4½ | 10 |
| 128 | Wheal Spearne | 10 | 75 |
| 128 | Wheal St. Ann | 9 | 15 |
| 260 | Wheal Trelawney | 7½ | 100 |
| 256 | Wh. Tremaine(St. Ervan) | 1½ | 20 |
| 256 | Wheal Tremayne | 35 | 25 |
| 128 | Wheal Trew | 20 | 21 |
| 256 | Wheal Trevenna | 3 | 4 |
| 92 | Wheal Tryphena | 140 | 265 |
| 128 | Wheal Venland | 12½ | 10 |
| 256 | Wheal Vlow (Perranz.) | ½ | ¼ |
| 184 | Wheal Vyvyan | — | 60 |
| 256 | Wheal Williams | 6 | 10 |

### FOREIGN MINES.

| | | | |
|---|---|---|---|
| 5000 | Alten Mining Company | 1½ | 2½ |
| 15000 | Asturian Mining Co. | 10 | 7 |
| 20000 | Australian | 2 | 3½–4 |
| 10000 | Anglo-Mexican Co. | 100 | 2 |
| 12374 | Ditto Subscription | 25 | 2½ |
| 3000 | Bolanos | 150 | 5½ |
| 2000 | Ditto Scrip | 15 | 5½ |
| 12000 | Brazilian Imperial | 22 | 7 |
| 10000 | Cobre Copper Co. | 40 | 18 |
| 8500 | Colombian Co. regis. | 55 | 1 |
| 5000 | Ditto Scrip | 5½ | |
| 5000 | Copiapo Mining Co. | 14 | 2½ |
| 10000 | General Mining Ass'n. | 20 | 15½ |
| 5000 | Kinsigthal Mining Ass. | 2 | 2½ |
| 20051 | Mexican Company | 59 | — |
| 2000 | Mexican & South Amer. | 7 | 1½ |
| 5000 | Mocaubas & Cocaes | 25 | 6–6½ |
| 29320 | { Rl. del Monte, regis. / Ditto unregistered } | 28½ | av. 2 |
| | Ditto Red Debentures | — | 20 |
| | Ditto Black ditto | — | 14 |
| | Ditto Loan Notes | 150 | 97½ |
| 7000 | Royal Santiago | 10 | 5 |
| 2000 | Pachuca Mines | 4 | 4½ |
| 41000 | St. John del Rey | 15 | 5½–6 |
| 43174 | United Mexican | 28½ | 2 |

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

## MISCELLANEOUS COMPANIES.

| Shares. | Companies. | Paid. | Div. p. cent. | Price. |
|---|---|---|---|---|
| 10,000 | Assam Tea Company | £20 | — | £ 3 |
| 1,080 | Auction Mart | — | — | £ ½ 28 |
| 10,000 | Australian Agricultural | 30 | 1 | 30 22 |
| 10,000 | Australian Trust | 35 | — | 30 |
| 8,000 | British Alkali | 25 | 4 | 16½ 16½ |
| 10,000 | British American Land | 35½ | — | 14 |
| 8,600 | British Rock and Patent Salt | 35 | 18 | 11 |
| 8,915 | Canada | 32½ | 6 | 28½ 30 |
| — | City Bonds (Navigation) | — | 9½ | 89 |
| 1,800 | Corn Exchange | 37½ | 12 | 26½ |
| 5,000 | Droitwich Patent Salt | 25 | 4½ | 11 |
| 2,700 | Equitable Reversionary | 95 | 4½ | 87 90 |
| — | General Reversionary Interest | 100 | 5 | 104 106 |
| 20,000 | General Steam Navigation | 14 | 1½* | 23½ |
| — | Hudson's Bay Stock | — | 10 | 230 240 |
| 2,100 | Hungerford Market | 100 | — | — |
| 1,500 | London Commercial Sale Rooms | — | 1½ | 31 32 |
| 8,000 | London Reversionary | 22 | — | 23 24 |
| 300 | Margate Pier | — | 10 | 196 |
| 10,000 | Mexican and South American | 7 | — | 3½ 4 |
| 20,000 | New Brunswick | 75 | — | — |
| 11,600 | Peninsular and Oriental Steam | 50 | 7 | 56 |
| 6,500 | Ditto | 40 | — | — |
| 5,387 | Reversionary Interest Society | 100 | 4½* | 97 |
| — | Royal Mail Steam | — | 5½ | 53 |
| 8,000 | South Australian | 25 | 6 | — |
| 20,000 | Upper Canada | 100 | 5 | 93 94 |
| 20,000 | Ditto | — | 5 | 93 94 |
| 10,000 | Van Diemen's Land | 20 | — | 3 4 |

* Those marked with an asterisk (*) are dividend per share.

## JOINT-STOCK BANKS.

| Shares. | Companies. | Paid. | Div. p. cent. | Price. |
|---|---|---|---|---|
| 22,500 | Australasia | £40 | £3 | £17½ |
| 20,000 | British North American | 50 | 5 | 45 |
| 20,000 | Colonial | 20 | 5 | 15½ 16 |
| — | Commercial of London | 20 | 6 | 22 23 |
| 4,000 | Ionian State | 25 | 6 | 24½ 26 |
| 60,000 | London Joint-Stock | 10 | 6 | 16 |
| 30,000 | London and Westminster | 20 | 6 | 26½ |
| 10,000 | National Provincial of England | 35 | 5 | 35 |
| 20,000 | National of Ireland | 22½ | 5 | 19 19½ |
| 20,000 | Provincial of Ireland | 25 | 8 | 44½ |
| 4,000 | Ditto New | 10 | 8 | 19½ |
| 20,000 | Union of Australia | 25 | 6 | 24 25 |
| 10,000 | Ditto New | 2½ | 6 | 2½ 2½ |
| 60,000 | Union of London | 10 | 3 | 13½ |

## LEAD ORES.

*Sold at Alston, September* 16, 1847.

[Duty Ores belonging to Greenwich Hospital, at per bing of 8 cwts.]

*Nent Head Receiving House.*

| | Per Bing. | Purchasers. |
|---|---|---|
| 391 bings, at | £4 4 0 | London Lead Company. |

*Hudgill Burn Receiving House.*

| | | |
|---|---|---|
| 30½ bings, at | £4 0 0 | London Lead Company. |
| 30½ „ at | 4 0 0 | J. C. Jobling, Esq. |

*Low Byer Receiving House.*

| | | |
|---|---|---|
| 166 bings, at | £4 1 0 | Messrs. Shield & Turnbull. |
| 58 „ at | 4 4 0 | J. C. Jobling, Esq. |
| 58 „ at | 4 4 0 | London Lead Company. |
| 46 „ at | 4 3 0 | Messrs. Shield & Turnbull. |

Total bings, 780.—Amount of sale, £3236 12s.

*Sold on the Mine.*

| Mines. | Tons. | Amount. | Purchasers. |
|---|---|---|---|
| East Wheal Rose | 104 | £13 1 0 | Dr. Somers. |
| ditto | 88 | 13 3 0 | ditto |
| ditto | 72 | 10 10 0 | ditto |
| Llancynfellin | 12 | 10 7 6 | Tamar Smelting Co. |

## BLACK TIN.

| Mines. | Tons. | Price per ton. | Purchasers. |
|---|---|---|---|
| Silver Valley | 3 | £32 0 0 | Calenick Smelting Co. |
| ditto | 2 | 30 0 0 | Williams and Co. |
| St. Agnes Consols | 17 | 43 10 0 | Daubuz; Calenick; Williams. |
| ditto | 1 | 31 15 0 | Daubuz. |

## COPPER ORES.

*Sampled Sept.* 8, *and Sold at Pearce's Hotel, Truro, Sept.* 23, 1847.

| Mines. | Tons. | Price. |
|---|---|---|
| Devon Gt. Cons. / Wh. Maria | 125 | £6 18 6 |
| ditto | 115 | 6 4 6 |
| ditto | 74 | 7 0 6 |
| ditto | 65 | 6 3 0 |
| Wh. Josiah | 102 | 7 8 0 |
| ditto | 100 | 6 6 6 |
| ditto | 89 | 8 17 0 |
| ditto | 84 | 5 3 6 |
| ditto | 79 | 6 3 0 |
| ditto | 77 | 6 16 6 |
| ditto | 63 | 6 3 0 |
| Wh. Fanny | 126 | 7 6 0 |
| ditto | 124 | 7 10 0 |
| ditto | 50 | 6 15 0 |
| ditto | 40 | 3 9 6 |
| Tresavean | 104 | 3 16 6 |
| ditto | 95 | 7 10 6 |
| ditto | 89 | 3 3 6 |
| ditto | 72 | 3 17 6 |
| ditto | 64 | 4 1 0 |
| ditto | 53 | 3 17 6 |
| Treviskey | 92 | 6 12 0 |
| ditto | 91 | 4 5 6 |
| ditto | 81 | 4 1 0 |
| ditto | 76 | 4 16 6 |
| ditto | 72 | 8 2 6 |
| West Caradon | 100 | 6 8 6 |
| ditto | 93 | 6 6 0 |
| West Caradon | 83 | £ 6 8 6 |
| ditto | 45 | 10 2 0 |
| ditto | 40 | 4 6 0 |
| Wh. Comfort | 94 | 3 9 6 |
| ditto | 93 | 2 15 6 |
| ditto | 61 | 1 11 6 |
| ditto | 40 | 3 7 0 |
| Poldice | 63 | 4 9 6 |
| ditto | 60 | 5 3 6 |
| ditto | 53 | 4 12 6 |
| ditto | 44 | 5 3 0 |
| ditto | 35 | 4 15 6 |
| ditto | 13 | 3 5 0 |
| Fowey Consols | 109 | 6 0 6 |
| ditto | 73 | 7 8 6 |
| ditto | 70 | 7 5 6 |
| Wh. Friendship | 76 | 9 4 6 |
| ditto | 66 | 8 5 6 |
| ditto | 36 | 4 14 0 |
| Barrier | 104 | 11 12 6 |
| ditto | 61 | 4 17 0 |
| Wh. Jewel | 51 | 6 8 0 |
| ditto | 38 | 3 10 0 |
| ditto | 37 | 4 16 0 |
| Bedford United | 110 | 8 6 0 |
| Wh. Maiden | 60 | 3 12 6 |
| South Towan | 15 | 3 2 6 |
| Wh. Lydia | 10 | 5 2 6 |
| Charlestown United | 14 | 10 18 6 |

TOTAL PRODUCE.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Devon Gt. Cons. —Wh. Maria / Wh. Fanny / Wh. Josiah | 1313 | £8835 | 17 | 6 | Fowey Consols | 252 | £1708 0 0 |
| | | | | | Wh. Friendship | 178 | 1416 9 0 |
| | | | | | Barrier | 165 | 1504 17 0 |
| | | | | | Wh. Jewel | 126 | 637 0 0 |
| Tresavean | 477 | 2138 | 16 | 6 | Bedford United | 110 | 913 0 0 |
| Treviskey | 412 | 2275 | 19 | 6 | Wh. Maiden | 60 | 217 10 0 |
| West Caradon | 361 | 2386 | 3 | 6 | South Towan / Wh. Lydia | 15 | 98 2 6 |
| Wh. Comfort | 288 | 814 | 16 | 0 | | | |
| Poldice | 268 | 1273 | 10 | 6 | CharlestownUnited | 14 | 152 19 0 |

| | | | |
|---|---|---|---|
| Average Standard | £ 98 9 0 | Average Produce | 8½ |
| Average Price per ton | £6 0 0 | | |
| Quantity of Ore | 4046 tons. | Quantity of Fine Copper, 360 tons 12 cwts. | |
| Amount of Money | £24,373 1 0 | | |

LAST SALE.—Average Standard £100 11 0.—Average Produce 8½

COMPANIES BY WHOM THE ORES WERE PURCHASED.

| Mines. | Tons. | Amount. |
|---|---|---|
| Mines Royal | 257 | £1149 5 0 |
| English Copper Company | 539 | 3337 2 4 |
| Vivian and Sons | 902 | 5622 13 3 |
| Freeman and Co. | 426 | 2447 1 7 |
| P. Grenfell and Sons | 392 | 1969 7 6 |
| Crown Copper Company | 122 | 859 5 9 |
| Sims, Willyams, and Co. | 543 | 2751 11 6 |
| Williams, Foster, and Co. | 865 | 6246 14 1 |
| Total tons | 4046 | £24,373 1 0 |

Copper ores for sale on Thursday next, at Pearce's Hotel, Truro.—Mines and Parcels.—United Mines 995—Consols 946—South Caradon 386—Perran St. George and Bolenna 349—Par Consols 248—Trethellan 188—St. Aubyn and Grambler 176—Treleigh Consols 160—Wh. Sisters 113—Wh. Ellen 105—Wh. Andrew and Nangilles 86—Wh. Clifford 70—Wh. Prudence 42—South Wh. Fortune 41—Goonvrea 10—St. Agnes Consols 7—Wh. Buller 6—Wh. Rose 4.—Total, 3926 tons.

Copper ores for sale on Thursday week, at White's Hotel, Pool.—Mines and Parcels.—North Pool 894—Wheal Seton 780—East Wheal Crofty 663—Tincroft 618—Camborne Vean 550—Dolcoath 335—South Wheat Basset 234—Fowey Consols 224—Condurrow 220—South Wheal Francis 215—East Pool 148—Wheal Bucketts 119—Lanivet Consols 90—Wheal Ruby 11—Oates's Ore 10—Wheal Ann 2.—Total, 5113 tons.

## COPPER ORES.

*Sampled Sept.* 1, *and Sold at Swansea, Sept.* 23, 1847.

| Mines. | Tons. | Prod. | Stand. | Price. | Mines. | Tons. | Prod. | Stand. | Price. |
|---|---|---|---|---|---|---|---|---|---|
| Cobre | 106 | 13½ | 92½ | £10 1 0 | Knockmahon | 61 | 6½ | 108½ | £ 5 1 0 |
| ditto | 105 | 13½ | 92½ | 10 0 0 | ditto | 42 | 7½ | 104½ | 5 17 0 |
| ditto | 99 | 13½ | 92½ | 9 19 6 | Cuba | 95 | 15½ | 92½ | 11 16 0 |
| ditto | 95 | 13½ | 91½ | 10 2 6 | ditto | 88 | 15½ | 91 | 11 15 0 |
| ditto | 94 | 24½ | 86½ | 18 15 0 | Holyford | 51 | 25½ | 87½ | 19 18 6 |
| ditto | 92 | 23½ | 87½ | 18 14 6 | ditto | 41 | 25½ | 87½ | 19 18 6 |
| ditto | 93 | 23½ | 87½ | 18 6 0 | Ballymurtagh | 47 | 4½ | 118 | 3 10 0 |
| ditto | 88 | 23½ | 85½ | 17 12 6 | ditto | 21 | 2½ | 145½ | 1 11 6 |
| Berehaven | 111 | 8½ | 102½ | 6 12 0 | ditto | 20 | 3 | 137½ | 1 17 6 |
| ditto | 91 | 9½ | 99½ | 7 7 0 | Holden's Slag | 41 | 3 | 141½ | 1 14 0 |
| ditto | 89 | 9½ | 100 | 7 7 6 | ditto | 21 | 2½ | 134 | 1 12 0 |
| Knockmahon | 110 | 9½ | 101 | 7 7 0 | Cwm Sebon | 12 | 10½ | 101 | 8 7 0 |
| ditto | 62 | 9½ | 101 | 7 4 6 | Italy | 1 | 15 | 92½ | 11 12 0 |

TOTAL PRODUCE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cobre | 769 | £10747 | 18 | 0 | Ballymurtagh | 88 | £235 | 1 | 6 |
| Berehaven | 291 | 2057 | 16 | 6 | Holden Slag | 62 | 103 | 6 | 0 |
| Knockmahon | 275 | 1810 | 4 | 0 | Cwm Sebon | 12 | 100 | 4 | 0 |
| Cuba | 183 | 2155 | 0 | 0 | Italy | 1 | 11 | 12 | 0 |
| Holyford | 92 | 1830 | 11 | 0 | | | | | |

Total tons, 1773.—Amount of money, £19,051 13s. 0d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

| | | | |
|---|---|---|---|
| English Copper Company | 250 | £2270 | 13 3 |
| Freeman and Co. | 110 | 808 | 10 0 |
| P. Grenfell and Sons | 41 | 70 | 11 6 |
| Sims, Willyams, and Co. | 190 | 3613 | 7 0 |
| Vivian and Sons | 488 | 3799 | 10 0 |
| Williams, Foster, and Co. | 541 | 5976 | 3 9 |
| Mines Royal | 95 | 961 | 17 6 |
| Schneider and Co. | 88 | 1551 | 0 0 |
| Total tons | 1773 | £19,051 | 13 0 |

Copper ores for sale, October 7.—Cobre 101, ditto 96, ditto 95, ditto 94, ditto 73, ditto 72, ditto 67, ditto 61, ditto 79, ditto 77, ditto 76, ditto 72, ditto 47, ditto 17, ditto 85, ditto 66, ditto 38, ditto 103, ditto 86.—Berehaven 106, ditto 98, ditto 96, ditto 92.—Cuba 76, ditto 67, ditto 57, ditto 43, ditto 33.—Recompensa 92, Knockmahon 61.—Total 2266.

ROYAL CORNWALL POLYTECHNIC SOCIETY.—We are informed that Mr. Hunt, keeper of mining records, Museum of Economic Geology, well known in this county as the former secretary of this society, will be present at the coming exhibition, and intends bringing with him, by permission of Professor Wheatstone, a working model of the new magneto-electric telegraph, and other objects of great scientific interest. There appears to be every prospect of this year's exhibition being a good one, both in the mechanical and fine art department.—*West Briton.*

## NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
*Mining Journal Office,*
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

The series of papers on the Silver and Gold Mines of the New World, will be continued in next Journal.

"B." (Redruth).—Our quotation was a correct one—the selling price of last, and this, week: apply to any of the City brokers.

"T. D." (Blaenavon).—See a letter on the Spray Pump, in another column. We are not aware what progress Mr. Storey is making with his method of working coal by machinery, but should be glad to hear.

"An Old Subscriber."—The Pantdrainiog Quarry is at present being worked by two of the directors, we believe, on their own account.—The particulars of the Shatterford Coal and Iron Company will be given in our next.—For Cameron's Steam Coal and Dyfngwm Companies, see Share List.

"A Constant Reader" (Deal).—In our next.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

# THE MINING JOURNAL

**Railway and Commercial Gazette.**

## LONDON, SEPTEMBER 25, 1847.

We this week present our readers, as usual, with the returns of the sales of copper ores during the past quarter; and we are happy to find, that, notwithstanding the distress which has generally prevailed, and the unsatisfactory state of the money market, and trade in general—leading onward to a great commercial crisis—there has been a considerable increase over the previous quarter. The sales at the ticketings in Cornwall, during the three months ended 24th June last, were 34,875 tons—amounting to 204,662*l.* 4s. 6d.; while, in the quarter just terminated, they have been 39,154 tons—producing 226,346*l.* 2s. 0d. In the standard, produce, and price, also, we are happy to find there is no material alteration; and, upon the whole, there appears every reason to commence the first winter quarter with the hope, that the next return will prove, at least, an average one. The above quantity of copper ore was purchased by the smelting companies as follows—viz.:

| | | | |
|---|---|---|---|
| Mines Royal | Tons 2662 | £18,829 | 6 10 |
| English Copper | 5799 | 31,380 | 19 10 |
| Vivian and Sons | 7376 | 40,506 | 3 10 |
| Freeman and Co. | 4517 | 25,364 | 4 0 |
| Grenfell and Sons | 4409 | 24,387 | 13 10 |
| Crown Copper Company | 294 | 1,679 | 18 5 |
| Syms, Willyams, and Co. | 5647 | 29,581 | 16 2 |
| Williams, Foster, and Co. | 8450 | 59,616 | 19 1 |
| Total | Tons 39,154 | £226,346 | 2 0 |

A very considerable increase has taken place in the sales at Swansea during the quarter, arising principally from the large quantities which have been continually arriving from Australia—the sales from this colony having increased from 673 tons, in the quarter ended 24th June last—producing 11,387*l.* 18s.—to 2961 tons, and money 58,828*l.* 9s. 0d. Copiapo have also increased from 435 tons, and 9790*l.* 18s., to 1032 tons, and 21,037*l.* 10s. 6d.; and Chili from 799 tons, and 27,157*l.* 4s. 6d., to 1025 tons, and 31,882*l.* 6s. 0d.; there has also been sold from New Zealand—none of which before appeared in the market—345 tons, and 3450*l.* 17s. 6d. In Cobre and Cuba ores there has been but little alteration. The total amount of sales for the quarter has been 15,308 tons—producing 205,771*l.* 13s. 6d., which were purchased as follows—viz.:

| | | | |
|---|---|---|---|
| English Copper | Tons 1931 | £26,033 | 10 6 |
| Freeman and Co. | 900 | 10,622 | 5 1 |
| Grenfell and Sons | 1650 | 18,845 | 16 11 |
| Sims, Willyams, and Co. | 1861 | 35,233 | 12 9 |
| Vivian and Sons | 4245 | 48,408 | 10 0 |
| Williams, Foster, and Co. | 4166 | 57,839 | 8 3 |
| Mines Royal | 204 | 2,334 | 0 0 |
| Schneider and Co. | 351 | 6,454 | 10 0 |
| Total | Tons 15,308 | £205,771 | 13 6 |

The following are the quantities of copper ores sold at Swansea, from the mines in Ireland, during the quarter—viz.:

| | | | |
|---|---|---|---|
| Knockmahon | Tons 1684 | £10,139 | 15 6 |
| Berehaven | 1323 | 9,501 | 9 0 |
| Tigrony | 361 | 1,353 | 13 6 |
| Cronebane | 488 | 1,976 | 11 6 |
| Ballymurtagh | 323 | 1,139 | 8 6 |
| Holyford | 462 | 9,354 | 11 6 |
| Lackamore | 41 | 477 | 6 0 |
| Ballygahan | 93 | 197 | 0 0 |
| Total | Tons 4,715 | £34,069 | 6 6 |

In order to render the mineral resources of South Australia more valuable, smelting must be adopted; and, we presume, the time is not very far distant before that process will be brought to bear upon the case of our antipodal regions. A considerable proportion of the copper ores, raised from the Burra Burra, Kapunda, Kanmantoo, and other mines in that colony, is of such a quality as will not bear the expense of shipping to England, for the purpose of being smelted. It follows, then, that, in raising the ores which are sold at Swansea, a large quantity of comparatively valueless stuff is brought up with them to the pit's mouth. The superior ore has to be selected from the inferior, before the former can be shipped at Port Adelaide; and, owing to the low assay of the latter, the expense of raising both the rich and the poor ore is charged to the account of the former—thus reducing the net proceeds of the ore sold at Swansea.

Now, if smelting were adopted, the assay of both these kinds of copper ore would be greatly enhanced—freight and charges would not have to be paid upon earthy foreign matter—the products of the mine would become more valuable—lodes of ore, not possessing very promising indications, could be worked; because the ores raised from them would have, previously to shipment, all the inferior matter separated from the pure metal: and the whole result would be to augment materially the worth of the South Australian mines. If the mine proprietors do not feel themselves able, in the present stage of their operations, to bring the ore to a pure metal, let them reduce it to a regulus (the plan adopted in Chili); and, although in that state the price realised could not be so great as when smelted, yet such a step would be one in the right direction, and might, possibly, lead to still further improvement.

By an analysis of the account-sales of some South Australian ores, imported a few months since, we find that the expense of raising them, together with freight and charges, amounted to about 13*l.* 4s. per ton, while the price realised was, on the average, about 14*l.* 19s. per ton—so that the profit, on a consignment of such ores, would not be very large; and, when the long voyage is considered, the length of time before the proceeds reach the colony, there is the stronger reason to diminish the expenses, and to increase the sale-price of the ore—both which might be accomplished by smelting. We should mention, however, that the parcel of ore referred to must not be taken as a general indication of the quality of South Australian ores—on the contrary, a very large proportion of the ore has produced a very high assay.

Another important consideration relative to this subject is, that were South Australian ores to be reduced, previously to shipment, pure copper, the commodity, might be sold in China and the Indian ports. New markets would thus be opened, a reciprocity of tr

be daunted by a few difficulties. Should the absence of coal in their own district prove an obstacle, they will import coals from New South Wales, or convey their ores thither; but, in the meantime, let them use for smelting, the wood that grows, perhaps, too abundantly in their forests; and, when the supply has been exhausted, they can substitute coals. While, therefore, we are glad to find, that the mineral resources of South Australia have yielded, and promise to yield, a large return, we are persuaded that, by the adoption of smelting, that return may be largely augmented, and the extent of this new article of export more fully developed.

Geology, as a science, although it has within the last half-century received such innumerable and marked enlightenments and confirmations, as have enrolled it among those studies which lead to the practical benefit of the human race, is still a sealed book to the million, notwithstanding the immense importance of a knowledge of its leading features, if not its abstract principles, in everything appertaining to agriculture—such as draining, the mixture of soils, irrigation, search for springs, &c.—as also to nearly every description of building, particularly marine construction on the coasts, river works, tunnelling, railways, and last, though not least, mining. Not one in one hundred among the middle classes, to whom a knowledge of its principles would be of the utmost importance, knows anything about the matter. Not only has the Government of this country done nothing to encourage the study of geology by the establishment of a mining school—an excellent example of which has been set in France—but there seems to be no public stimulus to a consideration of its sublime truths. We have music for the million! dancing for the million! the languages for the million! with everything else, whether of utility, or of no utility, offered, in the true "Cheap Jack" style, by professors of every grade, to "the million;" but the great, and absolutely needful, science of geology is neglected, even in our superior academies; and rare, indeed, is it that a popular and elementary public lecture is given on the subject. As applicable to mining science, strange as it may appear, although they seem inseparable, we think we are not wrong in stating that, in our upper schools, or even universities, no regular course of instruction or lectures have ever been attempted. There is, to be sure, a professor's chair at each; notwithstanding which, but little is done to render the sister studies of mining and geology of that interest to the public at large which their importance in the arts, and in a commercial point of view, so eminently entitle them to.

Such being the case, it is with much pleasure we observe that Mr. D. T. Ansted, professor of geology to the King's College, London, is about giving a course of lectures on practical geology and mining; these will combine a statement of those facts and phenomena of geology on which its practical applications are based; with maps, sections, and models; its application to agriculture and engineering, &c. The following is a syllabus of the course, as far as relates to practical mining:—

The nature of mineral produce, and conditions under which it may be obtained—its position in regular layers or in veins, in small irregular quantities, or in vast masses.

1. Mineral produce deposited in layers, and inclined at only a moderate angle to the horizon.

Coal Seams.—Ordinary position of coal—different kinds of coal deposits in England and elsewhere—first discovery of coal in a district—outcrop of associated beds—determination of dip and strike—selection of a plan of working, whether by driving levels from a hill side, or sinking shafts at once to the deeper portions—faults and dislocations of the strata—drainage of mines—ventilation of mines—accidents from foul air.

2. Beds of very great thickness, and large irregular masses of mineral produce, whether in layers or stockworks.

3. Mineral veins and lodes: their distribution, and the natural order of their occurrence—the contents of mineral veins: their direction, their origin, and the history of their filling by metalliferous ores—strings and bunches of ore—pockets and nests of ore.

Different kinds of lodes—cross-courses, contras, &c.—different conditions of a lode—pursuit of a lode when it is apparently lost—pursuit of a lode when crossed by a dyke, or fault, and has disturbed—determination of the hade, or underlie of a lode—identification of a lode at distant spots

First discovery of mineral veins by shoding and costeaning—subsequent operations and selection of a plan of working—working by trial levels on the lode or by cross-cuts—method of working, and principles of working by successive galleries at different levels.

Mining plans and records; importance of their preservation.

Prof. Ansted has already done much in rendering the science of geology clear and intelligible. In the works he has already published, he has divested it of its technicalities as far as consistent—given his readers a clear insight into its hidden wonders; and we are disposed to consider, that we have no one more capable of doing justice to the highly-useful, but certainly novel, undertaking, in which he has engaged—viz.: a popular course of lectures on practical mining in a collegiate school.

In a paragraph, in last week's Mining Journal, we stated our belief that a deputation had arrived in town from Newcastle-upon-Tyne, for the purpose of representing to her Majesty's Ministers the distressed condition of the coal proprietors; the facts, however, are, that the deputation, which was not appointed until Saturday, at a meeting held at Newcastle, to take into consideration the present state of monetary affairs, waited on the Chancellor of the Exchequer on Tuesday last, at his seat, Hickleton, near Doncaster. It should also be borne in mind, that the meeting did not consist exclusively of coalowners, but of the general commercial body—while the points more particularly dwelt upon at the meeting were the effects of speculation, the decrease of the circulation of the Bank of England from 22,000,000*l.* last year to 17,000,000*l.* at the present time, and the consequent dearth of the circulating medium. In the interview which took place on Tuesday, the Chancellor of the Exchequer said he did not consider there was any just cause for the apprehensions which the deputation and the mercantile body at Newcastle appeared to entertain—that the Bank of England had not limited its discounts—that he could assure the deputation, as far as he knew, and he fully believed; it was not the intention of the directors of the Bank of England to limit discounts, as they had done in April, or to resort to any other stringent measures—that he felt confident the worst was passed, and he thought the alarm which at present existed, would speedily subside.

The Marquis of Londonderry—certainly no mean authority on the subject—has sent a letter to the *Morning Post*, in which he expresses "his unmeasured surprise at seeing, in a leading article in that paper, a statement of the *distressed state* of the coal proprietors." He states that, "with the exception of the chairman (Mr. Bell), there was not one large coal proprietor present at the meeting in question—only brewers and gentlemen, who have speculated largely in shares in the numerous small collieries lately opened in Northumberland and Durham." He emphatically denies the existence of distress among the coalowners, who, as a body, he says, utterly disapprove of the proceeding. In his judgment, the coal trade was never in a more healthy state. The same high prices are not obtained; but those who have large coal-fields, great establishments, and capital embarked in the trade, now happily free from regulation of vend, meet with fair remuneration, and are content; and such ought not to be confounded with the mass who have made this strange and extraordinary appeal to Government.

It is not surprising that the present state of financial affairs should be felt, in some degree, among the coalowners, as well as other classes—the great dearth of the circulating medium, which now exists, affecting all; but it is highly satisfactory to find that the distress among this body has, to say the least of it, been over-coloured; and that, so far from the large body of colliers being thrown out of employ, there is every prospect of full employment through the winter. We trust the opinion given by the Chancellor of the Exchequer of the intentions of the Bank directors will be borne out by their future conduct, or it may, at length, be found necessary to somewhat modify the enormous powers entrusted to them in the Bank Act of Parliament; for it is a most unwarrantable absurdity, that a few individuals, congregated in the Bank parlour, and regulating, at will, a circulation of from 17,000,000*l.* to 22,000,000*l.*, can, in a few hours, most injuriously affect the interests of the whole commercial empire, representing some hundreds of millions sterling.

The discussion, which took place at the meeting of the Great Wheal Martha shareholders, on Wednesday, although occupying a much greater length of time than was necessary, is not void of interest. The plan of the directors being evidently unpalatable to the shareholders, and amendments having been proposed, as will be seen from our report, they readily gave in to the views of the meeting, evincing that they felt that their interests were identical. We, therefore, give them credit for disinterested motives, in as far as they hold many of those shares; but that can be no reason why others should agree with them in throwing up a previous agreement, the terms of which have been carried a certain length, but those that are important still unperformed—at the same time, that the inducements held out, to join that contract, should be cancelled, and the money paid on the faith of its fulfilment forfeited. We conceive, however, that the plan, as altered and now proposed, is more advantageous for all parties. The holders of "preference shares" are to receive an equal interest in the new company—this is as it should be; but there is another important alteration, upon which we did not observe last week. It was proposed, that the new company should have the option of purchasing the engine, &c., and all interest in the sett, at any time during the next three years, for the sum of 3000*l.*, and for that purpose they should have power to issue 1000 additional new shares, at 3*l.* each. This is so amended, as to relieve the new concern from any such burden, and at the same time do greater justice to the original 5*l.* shareholders, the expenditure of whose money may, doubtless, be virtually—if not really—lost to them; but which cannot be said to be of trifling value to those who may now, for the first time, embark in the undertaking. Upwards of 20,000*l.* have been spent by the present adventurers, by which they have carried the two mines (old and new) to certain depths, and, by driving numerous levels, have extensively proved the lodes so far as they have gone—that is, to the 90 fm. level in the old, and to the 40 fm. level in the new, mine. Now, this could not have been done without the sum just mentioned; but the new shareholders are to have the advantage of the knowledge thus obtained, without binding themselves to pay any compensation for it until they are actually making profits, and even then the original shareholders are to be *gradually* repaid, at the rate of 10 per cent. on the *net profits* of the new concern. As to the engine, sett, &c., reverting to the present owners, if not so purchased during that period, is no consideration whatever; for if the whole affair is not worth 3000*l.* after what is already done, and what will also then have been effected, we think it will be of little use for them to proceed any further in such unprofitable operations. The plan, as it now stands, is, therefore, far more advantageous for all parties, and as a proof of the satisfaction it gave to those present at the meeting, we may mention that, at least, 1000 shares, or one-half the new capital, was subscribed for in the room. We have reason to believe, from what we have heard of the reports of several experienced miners, that the Great Wheal Martha, if properly managed, is likely to become a very profitable undertaking.

In another column, we have given an account of the proceedings of the deputation from the Liverpool Stock Exchange, at their interviews with the chairman and directors of the several leading companies. It will be seen, that the opinions of nearly all these gentlemen are singularly similar—such opinions being, that the best policy for the railway companies to adopt, during the present monetary crisis, is, not to enter into any new contracts connected with bills for lines that were granted last session, excepting under very especial circumstances. Mr. Ricardo appears to be the only one to disregard the welfare of the general body of railway proprietors; and, on the part of the North Staffordshire Company, asserted, that he considered every company ought to act for its own interest—leaving the general welfare out of the question. If calls were needed, the directors would make calls; and, if they thought it to the interest of their proprietors, they would contract the works. Independent of Mr. Ricardo, however, we are glad to find so much unanimity among so many of these large and important bodies; the parties entrusted with the management of their affairs read the signs of the times, and, reading, understand, and act accordingly. With money at an enormously too large a rate of interest to contract loans, the selling-price of their stock vastly depreciated, and when, by continuing to carry on works and enforcing calls, they would aggravate the latter evil, by driving shares into the market, they have wisely determined to hold their hands, and wait until the storm has passed over, and a brighter sun appears in the commercial horizon. This unanimity on the part of the representatives of so much national wealth must have a soothing effect on the present irritation, and tend to tranquillise the minds of the general body of railway proprietors.

The lively and sincere interest which, it is no affectation to say, we constantly take in the well doing of the county of Cornwall, has caused our reading with great pleasure a letter in the *Falmouth Packet*, of last week, headed Suggestions for Improving the Trade of that town. It appears that, from several causes—of which the removal of the foreign mail packets, and the heavy cloud at present resting on all prospect of a useful railway connecting the town with the great trade route of the western counties, are the principal—the trade of Falmouth is in a state of great depression; the town is said to be embosomed in one of the richest corn-growing districts of the county—and that, notwithstanding that circumstance, the town annually lays out in the Isle of Wight some 40,000*l.* for the grain and flour of that district, and will not be customers for that essential article of sustentation, to the farmers of its own direct vicinity. To rectify this very grave error, the chief suggestion of the letter is, that the corporation of Falmouth take means to establish a corn market, without charging tolls on the corn brought in, and also erect mills for grinding it. We need scarcely say, with this proposition, as a whole, we most heartily concur, as calculated to confer benefits of a most permanent and important kind on the trade of that port and neighbourhood. We think the public of Falmouth will be grateful for suggestions, which are so well calculated to meet their necessities in this particular instance. There are no difficulties in the proposed measures which cannot be surmounted; but, under present circumstances, from what part of the heavens is the golden shower, however sparingly, expected to descend? Is not the corporation of Falmouth, *ex officio*, absolutely without funds? Whatever may be the wealth of its individual members, as a body under the statute, are they not known to be penniless? It is doubted if, among the opulent men who have filled the municipal chair of the borough, one can be pointed out, who, by a dead legacy or a living gift, has furnished five pounds to help to regild the corporation mace. Of course, money can be raised under the common seal of the corporation; but, even in that case, the repayment must fall on the shoulders of the resident householders, who successfully resist it, unless the corporation provides itself with the covering of an Act of Parliament, for founding their market and building their mills. If the farmers find, from these 10,000 consumers, a steady sale for their corn, we think there will be no disinclination to pay moderate tolls for that and the accompanying advantages. All market and harbour dues, if either market or harbour are to be much resorted to, must be lowered down to the minimum, which will keep alive the efficiency of the haven and the convenience of the market; but dues of some sort are indispensable; and, in this case, we should be happy to see them established, in the hope that, indirectly from that and other sources, it might be possible to make a purse for the corporation, which we are quite sure, not only in Falmouth, but in every other place, if it would be respectable, must be enriched—the corporation of London is mainly what it is by the munificent gifts of its magistrates and citizens. There is little chance of improvement, even from the judicious and beneficent project we have now noticed, unless the people of the town find competent leaders. If half a dozen, comparatively independent and able men, would take up this and other particulars, connected with the improvement of the place, there would be a good and just hope of a day spring to the prosperity of the town; but if the gentry of the district will sit sucking their thumbs, while the population is in a suffering or sinking state, then the least part of their criminality will be, that they have, though at an humble distance, put themselves in the case of that notorious oppressor, who fiddled while Rome was burning.

In our City Article of last week, we quoted a paragraph from the *Daily News*, stating that the mining districts were likely to suffer severely by the several failures which had taken place, more particularly those of A. L. Gower, Nephews, and Messrs. Sanderson and Co. The failure of Messrs. Reid, Irving, and Co., took place about the same time; and, as both these gentlemen were directors of the National Brazilian Mining Association, vague fears might be entertained, that that company would, in some way, suffer pecuniary loss. Such, however, we are assured, is not the case, and that, although holding a large interest, their failure can, in no way, interfere with the well-being of the association, whose prospects now are of the most encouraging description, and every succeeding dispatch produces increasing confidence of lasting prosperous results. We also understand, that the failure of Messrs. Reid and Co. will not even affect their branch house at Liverpool.

In another column will be found the commencement of a report on the great Welch colliery arbitration case—"Mostyn *v.* Eyton"—which, although it will occupy considerable space, will be found of a highly interesting character, as embodying the opinions and practice of the most eminent of the colliery viewers of the kingdom. The working of coal mines in a legitimate and workman-like manner, is of the utmost importance, not only to the freeholder, but the public at large—and hence the value of recording this investigation

Progress of Mining Industry in Italy.—Although Italy has been known for years to possess valuable and extensive coal mines, iron, copper, quicksilver, sulphur, lead, and other metals and minerals, yet mining undertakings have remained dormant, and it is only within the last two years that attention has been paid by scientific men to this important resource of national industry and wealth. Societies have lately been formed at Turin, Pisa, Milan, Verona, Genoa, Florence, Venice, Leghorn, Rome, Naples, and in the Abruzzi, composed of experienced engineers, geologists, mineralogists, and practical miners, for the purpose of exploring the mineral treasures of that promising portion of Southern Europe, hitherto lost to man. The introduction of railways in Sardinia, communicating from Turin with the leading cities on the main routes as far as Naples, which will shortly form the grand trunk line of the Italian States, when those through the Papal dominions are completed, has given an impetus to mining industry that never could have been anticipated, and will afford those means of conveyance, the want of which has always been so great a drawback to national enterprise. From the researches made by the members of the above societies, valuable discoveries of ores have been made, particularly in Sardinia, along the Appenines, and the Abruzzi, and companies are forming to work them on a large scale. One great advantage to mining adventurers is, that coal and wood is to be obtained but a short distance from the beds of ore, so that no difficulty presents itself to treat them on the spot. These undertakings have met with the greatest encouragement from the high authorities, and the last though not the least important one, his Holiness Pope Pius IX, who promises by the patronage he bestows upon the progress making in the arts and sciences, and modern inventions in machinery and manufactures, to cause a new era in the annals of Italy, by the development of mining, and the commercial aggrandisement and industry of the people.

The exportations of the precious metals to the continent, particularly silver, have been greatly on the increase during the last fortnight—viz.: silver coin to Hamburgh, 6000 ozs., and 42,000 ozs. of silver in bars—whilst to Rotterdam, it was the first week, 16,400 ozs. of silver coin, and 74,000 ditto in bars; and the second week, 18,000 ozs. of silver coin, and 60,000 ditto in bars—making a total of 40,400 ozs. of specie, and 176,000 ozs. silver in bars; and, during the present week, it has exceeded 150,000 ozs. It will be observed, that the greater portion is exported to Rotterdam—whilst formerly Hamburgh was the favourite port; this may be accounted for in consequence of large contracts entered into. To France, the exportations of gold and silver specie and bullion, have also been very considerable; but, as the trade in the precious metals is confined to only a *few select*, their monetary transactions are not made public, as they are not always entered at the Custom-house. This gradual decrease in gold and silver is beginning to be felt in many quarters, particularly the mining and manufacturing districts, where specie is often obtained with difficulty. At the Bank of England, in the Issue Department, the gold coin and bullion does not exceed 7,284,110*l.*, and silver bullion, 1,023,030*l.*; and the Banking Department, gold and silver coin, 607,932*l.*, which is a very great decrease in the metallic currency. However, it may be satisfactory to know, that the company has received some large remittances of specie from a great northern power, and which is now under process of being assayed. A large amount of new coinage is also being struck off at the Mint, preparatory to the October dividends. The importations of the precious metals from Mexico, Brazil, &c., are not so extensive—whilst the demand for France, and other parts of the continent, is greatly increasing; and should the projected loan of 14,500,000*l.* to the French Government be finally contracted for, the run upon this country for specie and bullion will be very considerable.

Produce of Emery in Greece.—An advertisement in this day's *Mining Journal*, gives notice of the sale, by auction, at Athens, in three months, of 30,000 cantars (1730 tons) of emery stone, now collected on the beach in the Island of Naxos, in Greece, where the mine is situated, in portions not exceeding 3000 cantars. The discovery of emery has been confined to few localities; and we have generally understood that from Greece and Egypt is the best in the market. We are informed, that a gentleman in Liverpool has, for the last 15 years, leased the emery mines of Naxos; and while it did not stand him in more than from 4*l.* to 5*l.* per ton, the market price has ranged from 20*l* to 24*l.*, and through which perfectly-justifiable monopoly he has realised a fortune. The Greek Government, aware of this, are now going to try their hand as "dealers and chapmen," in hopes they shall obtain much more by selling the stone in lots, than they have hitherto done by leasing the mines. We hope they will not find that "in grasping at the shadow, they have lost the substance."

American Shipbuilding.—The following is an account of the number and destination of ships built, and building, in New York during the present year:—W. H. Webb's yard: one ship, of 1000 tons, for Havre; one, 1000 tons, for Liverpool; one, 1000 tons, for ditto; two, of 1300 each, for London; and one steam-ship, 1900 tons, for New Orleans.—Brown and Bell: one ship, 950 tons, for China; and one steam-ship of war, 800 tons, for the Peruvian Government.—Westervelt and Mackay: one steam-ship, 2500 tons, for Bremen; and one of 1100 tons, for Liverpool.—Jabez Williams and Sons: one ship, of 850 tons, and one of 1000 tons, for New Orleans.—W. H. Brown: one ship, of 750 tons, and one steamer, for Charleston.—Lawrence and Sneeden: one steam-ship, 400 tons.—Patterson and Slack: one ship of 1200 tons, one of 950 tons, and one of 1300 tons, for Liverpool.—Bishop and Simonson: one steamer, 450 tons; one of 150 tons; and two of 540 tons, for the Brazilian Government.

Coinage of the United States for 1846.—Philadelphia: gold, $2,234,655; silver, $1,347,580; copper, $41,208.—New Orleans: gold, $1,272,800; silver, $1,211,000.—Dahlonega: gold, $445,149.—Charlotte: gold, $196,381.—Total, in gold, $4,034,177; silver, $2,558,580; copper, $41,208.

Copper Works at Loughor.—The Spitty Works have been purchased by a London company, and a great number of men have been engaged to repair the furnaces, and the other parts of the works. This company, finding that the South Wales Railway would pass so close to the place, and presenting so many facilities for the export of copper, have embarked in the undertaking very spiritedly.—*Swansea Herald.*

Great Nassau Tunnel.—The great tunnel through the mountain on which stands the town of Weilburg, in the Duchy of Nassau, formed for improving the bed of the Lahn, has just been terminated after five years' continuous labour. The waters of the Lahn were to be let into the tunnel on the 12th, and 2000 gas lamps were to be lighted, and always kept burning. The formal inauguration of the gigantic work is to take place on Oct. 15.

## PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The discoveries of the frauds committed in the supply of coal to the different naval stations of this country, appear to be of a very serious character. Several persons are at present in custody, and among them are Messieurs Hautier Fils et Decaens, of Havre—who, you may, perhaps, happen to recollect, obtained one of the large coal contracts, at the last adjudication, which took place at the Ministry of Marine. It appears that the manner in which the frauds were effected was, to give declarations of the receipt of larger quantities of coal, at the different stations, than were really delivered—the payments made by the Marine Department being for such quantities as were expressed in these declarations. Thus, a vessel, which left Havre as capable only of carrying 400 tons, would be declared, on its arrival at its destination, to have conveyed 600; and the 600 would have been duly paid for.

Pains are taken to keep the real facts of the case secret for the present. Surprise is, however, loudly expressed at the Marine Department not having discovered the frauds earlier. I hear that it is positively stated, that Messieurs Hautier Fils et Decaens had actually undertaken to deliver English coal *cheaper than they could buy it.* The last contract they made was, as was stated at the time in the *Mining Journal*, to deliver 3000 tons of English coal at Tahiti.

One of this morning's papers publishes a letter from Algiers, confirming all that was ever said in the *Mining Journal* as to the infamous quality of the coal supplied to the French stations in Africa, and other places. The worthy men of the Ministry of Marine, who wrote to the *Moniteur Industriel*, to say that my statements on this subject were false, must, I should think, feel very uncomfortable at the proofs of the truth of my assertions, which are being brought forward every day.

It will be a most scandalous shame if measures be not now taken to introduce something like honesty into the future bestowal of contracts. There must be no more favouritism—no more corrupt exclusion of honourable competitors—no more snapping at the offers of men who undertake to deliver English coal, at a distance of thousands of miles, at a lower price than they could possibly purchase it at the mouths of English pits. To secure honesty, the best thing that could possibly be done would be, to declare that no contract for the supply of English coal shall henceforth be taken by any but Englishmen; for it is perfectly evident, that no French house can supply British coal so cheap as our countrymen. As to any Frenchman who might offer to supply it cheaper, he ought immediately to be arrested as a rogue; for it would be perfectly impossible for him to fulfil his engagement honourably.

More news from St. Etienne, about the great coal company of the Loire. The Municipal Council of St. Etienne was to have had a grand field-day, last Wednesday, against the unfortunate company. Its greatest orators had primed themselves with the best arguments they could find against it, and all its members, with the exception of two, had prepared to vote for its annihilation. But lo! the prefect of the department had caused the sub-prefect to notify to the mayor and the council, that discussion on the "great coal question" did not fall within the matters which the law allows to be discussed by municipal councils; and that, consequently, the threatened debate and vote would not be allowed to take place—as the only consequence of them would be, to add to the excitement which already exists, without doing any good whatever. Picture to yourselves the blank and disappointed air of the worthy councillors, at this stern decree of the terrible prefect. But the poor fellows were obliged to respect it; and so, gulphing down their indignation as best they could, they grimly separated in high dudgeon.

Such a proceeding as this on the part of the Government—of course, the prefect only acted by its orders—with a municipal council, would, in England, be considered a most iniquitous interference with the right of free discussion, and would most certainly be contemptuously disregarded; but as the law allows it in this *free* country, I really cannot blame the Government for adopting it. The truth is, the hostility of the St. Etienne people to the Loire Coal Company, has become a great nuisance—it has also become excessively mischievous, by keeping alive animosity between neighbours, rendering the working classes discontented, and making the unreflecting portion of the public falsely believe that it is being imposed on by a gigantic and oppressive monopoly.

The newspapers state that, whilst some men were recently digging some ground, in the commune of Colleret, arrondissement of Avesnes, they discovered ore, containing a large quantity of manganese—which caused the belief to be entertained, that a large quantity of veritable manganese ore will hereafter be discovered.

Contracts will be received by the Marine Department, at the beginning of next month, for supplies of steel, sheet-iron, &c.

Notwithstanding the high prices offered by the ironmasters and the dealers, the sale of only a portion of the wood from the forests of the King was effected last week—the rest being reserved, in the hope of getting higher prices. This dearness of fuel will, of course, add to the cost of the products of the furnaces.

The Department of Public Works notifies that, on the 16th of October next, it will receive propositions for the supply of a quantity of rails and chairs for the Versailles and Chartres Railway. A certain number of French ironmasters, who manufacture rails, are to be invited to send in offers for the supply of them; but propositions for the supply of the chairs are to be allowed to be made by all the metallurgic establishments in the kingdom.

A demand for the concession of a mine of zinc and lead—the latter containing silver—situated in the commune of Laruns, in the mountains of Arre, has just been addressed to the Department of Public Works.

The papers mention, on what appears to be good authority, that platina has been discovered in the valley of the Drac. It is said to exist in large quantities, and to be of good quality. This discovery is of great importance—France, it was supposed, being totally without platina.

The St. Dizier letter, of the 16th, states, that *fers battus à la houille* were at 360 fr.; *fers laminés* at 370 fr.; *essieux bruts*, 365 to 370 fr.; ditto *étampés*, 380 to 385 fr.; *bandages percés*, 390 fr.; *fils de fer*, of the new tariff, 5 fr. Demands for iron were still feeble, and the commercial travellers were doing nothing. The *fontes de moulage* were little in demand; and the *fontes blanches* were offered at 160 fr., delivered at St. Dizier.

The Company of the Iron-works of Denain has, in conjunction with the Company of the Coal-pits of Anzin, made searches for iron ore in the principal pits of that company. The works, that have been executed, are stated not to be yet far advanced; but still iron ore has been discovered. The investigations that are going on are looked to with great interest, because, if they should lead to the discovery of large quantities of iron ore, the fact will be one of great importance indeed, inasmuch as, thus far, no ore has been found in France in the immediate vicinity of coal.

The *Moniteur Industriel* states, that a mine, in which gold exists in conjunction with silver, has just begun to be worked at Zmeef, in the government of Irkoutsk, in Siberia.

Official documents, lately published by the Russian Government, state that, in 1846, 56,000 lbs. (English) of gold was obtained from the mines of Altai and the Oural, being 11,120 lbs. more than in 1845. The working for platina had considerably decreased since the decree forbidding the exportation of it. In 1843, the kingdom of Poland imported metals of the value of about 52,000*l.*, chiefly from Prussia and Austria, and exported for the value of about 90,000*l.* to Russia and Prussia.

Some slight disturbances have taken place at the great machine manufactory of Messrs. Derosne, Cail, and Co., in consequence of the men of a firm engaged in metallic industry being irritated at Messrs. D. having commenced to manufacture themselves certain articles which they require.

*Paris, Wednesday.*

BELGIUM.—The grand free-trade demonstration, which was so long talked of, has passed off with great *éclat.* The representatives of the English free-traders played a very creditable part in it. It is, however, to be regretted that the speeches were not of a more practical, and, if I may so speak, more local, character. Instead of being eloquent of declamation and argument in favour of free-trade principles in the abstract, they should have been occupied in showing that free-trade principles are well adapted to Belgium, and to the pecuniary interests of the great mass of Belgians. They should have shown, for example, that Belgian ironmasters could well afford to lessen greatly, or even dispense with altogether, the protective duty against British cast-iron; and they should have proved that Belgian linen has nothing to fear, if put in free competition with Irish. Had this been done, the Congress would have effected great good; and the English members of it would have had the satisfaction of helping to find a new market for two of the staple products of their country. But, at present, they have laid themselves open to the reproach of conciliating the country manager, in the performance of the play of *Hamlet*, with the part Hamlet omitted—they have talked of free-trade in Belgium, without inquiring anything about the Belgian violations of free-trade principles; and yet, what can be more ridiculously absurd than for a great metal-producing country like Belgium to put an exhorbitant tax on English iron!

The metallurgic establishments which have sent articles to the exposition of industry are the Société de Couillet; the Société de Monceaux; the Forges de Clabeck de l'Heuse de Thyle Chateau; the great establishment of Seraing; the Company du Phenix of Ghent; Messrs. Derosne et Cail; the Company of St. Leonard; and many others. The articles exhibited are of every kind, from locomotives down to simple articles of ironmongery. Among the objects, which have attracted a good deal of attention from Frenchmen, is a piece of sheet-iron of 500 kilogrammes. Its size is said to be larger than that of any hitherto made in France, or even in Belgium. It would be curious to hear what M. Mertian, the French ironmaster of Montelaire, would say to it, as he it was, you may recollect, who stoutly maintained, some time ago, that it was absolutely impossible for the Trans-Atlantic Steam Navigation Company of France to obtain sheet-iron of anything like that size any where on the continent, and he even expressed doubts whether it could be obtained in England.

The shareholders of the coal pits of the Bois d'Heigne and Cabruettes, near Charleroy, are to hold a meeting on the 26th, at St. Quentin.

Large quantities of zinc are now used in this country in fabricating statues, fountains, garden and household ornaments, &c. The zinc is coloured like bronze, and is really an excellent substitute, both for it and marble. Has no English house yet turned this cheap article to these uses? If not, one should do so, without delay, for where is the cit who would not ornament his house and garden with statues and casts representing sculpture, when he could do so for a few pounds?

The well-known Messieurs Riche and Co. have just been authorised, by royal ordinance, to construct, at their works, a *laminoir*, for the manufacture of rails, for the railway entre Sambre et Meuse. The company of the iron-works of La Providence et Marchienne au Pont have been authorised to erect a new *fourneaux au coke*, and 28 *fours à coke*. These little facts show that the metallurgic industry in Belgium is in a prosperous state.—*Brussels, Tuesday*

## THE GREAT COAL COMPANY OF THE LOIRE.—(*Concluded.*)

The Notes, published by the company, after stating that the great number of concessions, divided, as they were, into several smaller concessions, not only caused greater quantities of coal to be extracted than were required, but led to the waste and destruction of the whole basin, set forth a variety of facts, showing that previous to the formation of the company, a great many of the concessions were actually worked at a loss. Thus, it appears that, from 1824 to 1844, only 23½ concessions, out of 61, were worked at a profit; that, in 1840, 45 concessions were worked with a loss, and only 18 with profit; 1841, 45 with a loss, 16 with profit. In the latter year, 6,230,000 metrical quintals of coal were sold with 850,000 fr. loss, and 4,818,592 quintals, with 390,000 fr. profit. The Notes also state, that the deplorable state of the basin led to the forming of an association between the occupiers of the coal pits, by which they agreed only to extract a certain quantity, and to sell at a certain price; but as this association did not include all the holders of concessions, its products were undersold, and this led to disagreement among the members, and eventually to a dissolution of the concern. On the formation of the General Company, it sold, from 1st January to 1st Oct., 1846, 6,057,490 hectolitres of coal with a profit, and 1,726,351 with a loss—43 shafts having been worked with a profit, and only 27 with a loss. This, then, is a result which speaks in favour of the concentration of a large number of concessions in the hands of one company, and it contrasts strikingly with the results from 1824 to 1841. The Notes next show that, previous to 1844, the cost of extracting coal was, from a variety of circumstances, much dearer in the basin of the Loire, than in the other principal coal basins of France; whilst the selling price of coal was less. The Notes then proceed to state what the company has done, and means to do, for the miners and other workmen, and to defend its position with regard to the holders of other coal mines in the basin. It winds up by contending that its existence must needs be advantageous to the public in general.

Having now allowed the company to tell its own tale, and plead its own defence, we here leave it, referring our readers to our Paris Correspondence for all that may occur of interest in connection with it. We will just observe, that every one interested in the working of mines, and especially of coal pits, would do well to follow the proceedings relative to the company with some care, for the question involved in its existence—that of the propriety, or impropriety, of uniting a vast district of coal field, under one management—is of great importance to the mining world.

## IMPROVEMENTS IN SMELTING COPPER ORES.

In the *Mining Journal*, of Feb. 6, we described an improved method of smelting copper, for which Mr. James Napier had taken out a patent; we have now before us a specification of another patent recently secured by the same gentleman, for further improvements in the smelting of such description of ores as he has not provided for in his previous one. In the first plan, when the ore contains little or no sulphur, the calcination described in his previous patent may be dispensed with; and as some copper ores are found to contain sufficient iron, it is not necessary, in such cases, to make any addition of iron, as described in the aforesaid patent. Another part of this specification applies to the treatment of ores containing silver or gold, or both, with alkali, lime, iron, coal, or galena. The first object in this new method is to separate the earthy matters; for this purpose, such an assortment of the ores is made, that the silica shall be in about the proportion of from 50 to 75 per cent.—the other ingredients in the matrix consisting as usual of alumina, lime, baryta, and fluor-spar; oxide of iron causes the mass to fuse more readily; if the ore, or a mixture of ores, employed, contain less than the above proportion of silica, that proportion must be made up by the addition of sand; and, if the mixture contain too large a proportion of silica, lime or fluor-spar must be added to reduce it to the proper proportion. Should the ore contain iron and sulphur, in the proportion of one of each to two of copper, to every ton of ore is to be added 56 lbs. common salt, 40 lbs. lime, and 100 lbs. anthracite coal; these ingredients are then fused in the melting furnace, the slag and scoriæ skimmed off, the furnace tapped, the metal run into sand moulds, and the pigs to be treated as hereafter described. Should the ore contain less than one of iron to two of copper, sulphuret of iron must be added to make up the proportions; or, where the mass has been melted, and the slag skimmed off, add 30 lbs. of scrap iron; when perfectly fused, and the iron has disappeared, the furnace is to be tapped, and the copper run out into sand bowls; when the pigs are set, they are thrown into cold water, in which they become disintegrated, and fall into a fine powder; this powder is left exposed to the atmosphere, and then calcined. The oxide of manganese may be used instead of iron, but iron is preferable; when the ores contain little or no sulphur, the calcination and disintegration may be omitted. Sand or lime, and oxide or carbonate of iron, is now to be added, to bring the silica and other ingredients to the above-named proportions, for the purpose of converting the slag into a glass; 80 lbs. of common salt, 50 lbs. of lime, and 100 lbs. of anthracite coal, all finely ground, are to be added to 1 ton of ore, containing 12 per cent. of metal; but, should the ore be richer, less salt and lime would be required, and more anthracite. The time for fusing 25 cwts. of the ore would be about six hours; and, should any regulus be produced, it must be afterwards roasted and refined. When the copper ore contains silver or gold, or both, it is to be calcined and disintegrated, so as to bring it to about 50 per cent.; it is then to be mixed with 50 lbs. soda ash, 50 lbs. slaked lime, 1 cwt. anthracite coal, 1½ cwt. scrap iron, and 4 cwts. galena; the whole is now to be fused, the slag removed; and, when the metal has been well rubbled, the furnace must be tapped, and the metal run into pigs. The lead will be found reduced at the lower part of the first and second pigs, and will contain the whole or greater part of the silver or gold previously contained in the ore; from this lead the precious metals may be separated by the ordinary processes, and the copper regulus is then to be re-roasted, and treated over again with fresh ores. Should the ore containing the silver or gold contain no copper, 4 cwts. of copper pyrites is to be added to every 16 cwts. of the ore, and treated exactly as above described.

THE IRISH TRANS-ATLANTIC PACKET STATION.—The Great Southern and Western Railway Company are advised by their engineer, Sir John Macneil, that Valentia is the most proper point for a western packet station, as it will ensure the American traffic to the above company, by their almost direct line of railway with Dublin.

IMPROVEMENT IN STEERING VESSELS.—A number of the Clyde steamers have the helm-wheel placed on an elevated platform, between the paddle-boxes, in front of the funnel. This appears to be an improvement, as the pilot will be better able to steer clear of the numerous small craft usually cruising about

# Proceedings of Public Companies.

*MEETINGS DURING THE ENSUING WEEK.*

TUESDAY.....Newport, Abergavenny, and Hereford Railway—offices, at Twelve.
Irish South-Eastern Railway—offices, Dublin, at One.
WEDNESDAY...Gwinear Consols Mining Company—offices.
Callington Mining Company—offices, at Two.
British Gas-Light Company—offices, at One.
THURSDAY.....Tincroft Mining Company—offices, at Two.
Stockton and Hartlepool Railway—offices, Stockton, at half-past Ten.
FRIDAY.....West Wheal Maria Mining Company—Bedford Hotel, Plymouth, at Two.
Eagle Insurance Company—New London Hotel, Blackfriars, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

## LLYNVI IRON COMPANY.

The half-yearly meeting of the shareholders of this company was held at the office, Moorgate-street, on Wednesday, the 22d inst.—Dr. BOWRING, M.P., in the chair.—The audited accounts were laid on the table, and approved, and a dividend of 2½ per cent., for the six months ending the 30th June, on all the paid-up capital, was declared, and ordered to be paid on the 8th Oct., the balance of profit and loss being passed to the credit of the rest account.—A favourable report was made, of the position and prospects of the company; and a general extraordinary meeting announced for Oct. 6, to confirm the resolution of the board, for extending the borrowing powers of the company to the amount of 30,000*l.*, in addition to the present power of borrowing 20,000*l.*—Thanks were voted to the chairman and directors, for their judicious management of the concerns of the company.

## RAILWAY ACCIDENTS.

In a Parliamentary return, presented to both Houses, by command of her Majesty, respecting the number and nature of the injuries to life and limb which have occurred on the railways in Great Britain and Ireland, from the 1st of January to the 30th of June, 1847, as reported by the various railway companies to the Commissioners of Railways, minute details are given, by analysis, of the returns recorded in the office of the Commissioners of Railways—Duncan M'Gregor, Registrar.—It appears that, of the 101 persons killed and 100 injured, on all the railways in Great Britain and Ireland, during the six months ending the 30th of June, 1847, there were—

| | | | |
|---|---|---|---|
| 14 | Passengers killed, and | 48 | injured, from causes beyond their own control. |
| 8 | Passengers killed, and | 3 | injured, owing to their own misconduct, or want of caution. |
| 8 | Servants of companies killed, and | 17 | injured, from causes beyond their own control. |
| 51 | Servants of companies killed, and | 94 | injured, owing to want of caution, or recklessness |
| 19 | Trespassers killed, and | 7 | injured. |
| 1 | Person killed, and | 1 | injured, while crossing the railway at the level crossings, owing to misconduct of servants of the company. |
| 101 | | 100 | |

And, for the same period, the number of passengers amounted to 23,119,412.

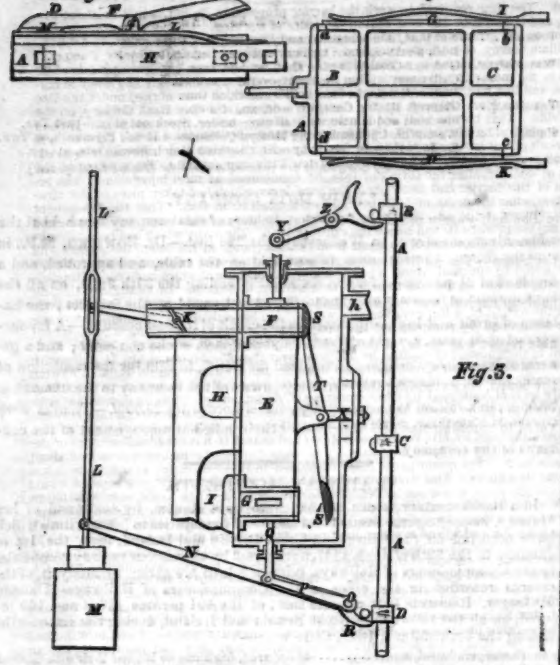
MADRAS AND ARCOT RAILWAY.—We are glad to find that a company has started, in the full determination of carrying out this important line. We hope to see India intersected with railways; the advantages arising from this mode of conveyance are so great and so palpable, that it were useless to attempt pointing out their importance. The question of the perfect practicability of establishing the railroad system in India being now definitively settled in the affirmative, and the liberal terms which the East India Company offer—viz.: a guarantee of 5 per cent. per annum, to commence immediately calls are paid, and to continue for 25 years—render it now only necessary to decide upon those localities for the construction of the first, where the population and commercial position of the termini will ensure a paying traffic. The Madras and Arcot line offers advantages, both in construction and the prospect of most profitable returns, perhaps not surpassed by any locality in India—while it will be the first that will be opened in the three presidencies. Its length, 71 miles, may be for all railway purposes considered a dead level, the different elevation of the two termini not exceeding 600 feet; and a raised road, which has been long in existance, successfully proves that works of this description can be made to stand all the destructive effects peculiar to the climate, which have been alleged as offering an insuperable bar to railway enterprise in India. The population in the Presidency of Madras is now estimated at upwards of 14,000,000, and that of the city, one of the termini, 600,000; the line will pass close to the populous town of Conjeveram, 45 miles from Madras, and through a densely-peopled country the entire distance. So favourable is the country for engineering purposes, that it is confidently estimated the cost of the line will not exceed 5000*l.* per mile; and should the success of the railway warrant the extension of the system throughout the Madras territories, it is proposed that additional capital shall be raised, to continue the line by Cuddapah, Bellary, and Hyderabad north; and Mysore, Salem, and Trichinopoly, west and south; and to connect the more remote provinces with the main lines by branches, of less expensive construction, throughout the entire presidency. The capital is 600,000*l.*, in 12,000 shares of 50*l.* each.

HALLETTE'S ATMOSPHERIC RAILWAY SYSTEM.—In addition to some observations on atmospheric railways in our last Number, we inserted an extract from the *Globe*, on the subject of the funds advanced by the French Government, for a fair trial of Hallette's system, having been expended on the carrying out an experimental line on Clegg and Samuda's plan, which had entirely failed. We have since understood that it is by no means probable that the several parties interested in the success of M. Hallette's invention are likely to give up the thing, because the evident intentions of the French Government had been frustated, or to say the least of it lost sight of. Considerable efforts appear to be making to obtain a fair trial on some of the new lines which are in course of formation on the continent; and a very general opinion prevails in France that the system, if once established, cannot fail proving eminently successful, in all the essentials of perfect railway transit—such as simplicity, speed, safety, certainty of action, and great economy. In the *Mining Journal* of May 2, 1846, we gave a lucid and popular description of the entire principle, with the results of its operation on a model line of 400 ft., laid down at the Rosemary Branch, Peckham, with a tube 5½ inches diameter, where it was inspected by numerous engineers and scientific men, with much satisfaction; and we have on various occasions, both previous to, and since that date, called attention to the subject. The late M. Hallette, in 1844, constructed a full-sized working line at Arras, having a tube of 9 inches diameter; and, from the results of which, he, as a thoroughly scientific man, and all the engineering talent of France who witnessed the results, were completely satisfied that it would be successful in practice; and complete arrangements were made for stopping at stations, passing sidings, reversing and turning points, &c. Under these circumstances it certainly appears strange, that after the lapse of more than three years not the slightest advance has been made, even to *try* the principle on a large scale, and we shall be happy to hear that the present movement leads to its adoption on ever so short a line, as it would be highly gratifying to ascertain its capabilities, which are evidently considered great. Of the perfect tightness of the valve, we have no doubt; and if the general details of working are equally good, there is little fear but that it will prove successful. We think, also, the company now in possession of the patent should persevere in the endeavour to obtain a trial of the plan on a short line in this country.

EDINBURGH AND NORTHERN RAILWAY.—This line was formally opened on Friday last. Throughout, we might almost say, the whole of Fife, the event has created the most lively interest, and been hailed by all classes of the community as one which indicates the commencement of a new era in the social as well as the commercial history of the county. The idea of a railway through the kingdom of Fife has been one often thought of, and fondly anticipated; and now that it has been realised, its merchants, manufacturers, and agriculturists look forward to this, the high way of modern progress, as the prognostication of their future prosperity and commercial greatness. Besides the advantages which this railway will secure in a local point of view, it will form the connecting link of the great eastern line of railway, from the one extremity of the empire to the other; and, thus, when the Dundee and Aberdeen Reilway is completed, which, it is expected, will be in the course of next year, the distance of land conveyance, which could only be traversed amidst much inconvenience in the course of six days at least, will be run over with ease in three times as many hours.—*North British Mail.*

JOINT-STOCK COMPANIES.—Among the Acts passed in July last was one respecting joint-stock companies (the 10th and 11th of Victoria, c. 78). "An Act to amend an Act for the Registration, Incorporation, and Regulation of Joint-stock Companies." It is now provided that, in addition to the particulars which the promoters of every company are, by the Act 7th and 8th of Victoria, c. 110, required to return to the office for registration of joint-stock companies, when, as from time to time they shall be decided on, such promoters shall also return to the office the following additional particulars as soon as the same shall be decided on:—First, the amount of the proposed capital of the company.—Secondly, the amount and number of the shares into which the same is to be divided; and if the company be dissolved, or be incorparated by Act of Parliament, or by Royal Charter, or by letters patent, or be in any way withdrawn, or supposed to be withdrawn, from the operation of the Act, the promoters of the company shall forthwith give notice thereof to the Registrar of Joint-stock Companies. By one of the nine provisions in the Act, a penalty is specified on promoters issuing, at any time before a complete registration, any prospectus, &c., containing a statement at variance with the particulars previously delivered to the office.

## IMPROVEMENTS IN STEAM-ENGINES.




[Specification of patent granted to Mr. MATTHEW SPROULE, of Liverpool, engineer, for "Certain improvements in Steam-Engines."—Patent dated 10th March, 1847.]

These improvements, which have reference to every description of steam-engine in which the steam, for actuating the same, is to be used expansively, consist in the application of a new construction of valve, which the inventor denominates "The expansive clack slide valve;" and, in order to explain the nature of this invention, the specification is accompanied by a sheet of drawings, illustrative of the principle of construction thereof.

The *first* part has reference to that class of engines known as locomotive engines, and the drawing shows the construction and arrangement of such expansive clack slide valve, in connection with the valve which slides against the face of the cylinder. As an example of the principle of this invention, suppose A, at the *figs.* 1 and 2, to represent the slide valve, the inventor constructs it in the following manner:—B, C, are two ports, or openings, over which there are clack valves, D, E, shown at *fig.* 2, formed at opposite ends of the rod, F, of which there are two vibrating upon a rod, or spindle, *f*, attached to the valve, A—this valve has openings, or ports, *a*, *b*, *c*, *d*, formed therein, against which there are fitted slides, G, H, to which are connected the rods, I, K, for adjusting them over the said openings. The effect of this arrangement is as follows:—Upon steam being admitted into the valve box, A, it will appear evident that it would press equally upon both clacks, and thereby leave the ports, or openings, B and C, in the valve uncovered; to cause, therefore, one of these clacks to descend, the inventor employs carrier springs, L, which glide under steel plates, M, upon the clack, D, by which the opposite clack is caused to descend; the steam will then act upon the piston in the cylinder throughout the entire length of the stroke, the slides, G and H, are then reversed—so as to remove the spring carriers, L, from contact with the steel plates, M, upon the clack, and, as the valve, A, is moved, and one of the openings therein uncovered, the steam will rush in through it. The inventor states, that the position of the slides, when the valve is at half stroke, will give a nearly infinite degree of expansion to the steam. It will appear evident, that when the ports, or openings in the valve, are not opposite to the opening in the cylinder, that these will form steam-tight chests, which are employed for the following purpose:—Suppose the steam to be entering the cylinder through the port—in order to cut the steam off at any particular part of the stroke it will be necessary to relieve, or balance, the pressure upon the upper side of the closed clack, which is effected by the steam entering into the chest as the openings, *a*, *b*, are uncovered, when the rush of steam through the unclosed clack port will cause it to be closed, and allow the steam to enter the uncovered port, or opening, and effect the return stroke of the piston, such clack remaining open until the port is uncovered, whereby each clack will be alternately acted upon, so as to cut off the steam as required.

The *second* part of this specification shows another application of these improvements to marine engines; and the *third* part shows the manner in which such improvements may be applied to pumping engines; and this being the point most likely to interest the readers of the *Mining Journal*, it will be that to which attention will be directed, merely premising that the same principle of action is applied to all the other objects enumerated and claimed by the patentee. The accompanying diagram exhibits, at *fig.* 3, certain parts of a pumping engine, of which A, A, marks the engine-rod, or ram, upon which are fixed the adjustable pieces, B, C, D, employed for purposes hereafter mentioned; E, the slide valve, which is constructed with ports, or openings, F, G, that correspond with the induction and eduction passages, H, I; K, a throttle valve of the ordinary construction, and actuated in the manner hereafter mentioned; L, a slotted rod, to the lower end of which the cataract, M, is affixed, such rod receiving motion from the rod, or ram, A, through the agency of the lever, N, upon the axis, or spindle, O, of which there is fixed a short lever, P, for actuating the rode, Q, employed for the purpose hereafter mentioned; R, is a curved lever, for imparting motion to the levers, N and P; S, $S^1$, are clack valves formed upon opposite ends of the rod, T—these rods are mounted, and vibrate upon a fixed axis, or spindle, U; V, is a metal slide, placed upon the outside of the casing, W, and connected thereto by a rod, W, for the purpose of relieving the pressure on the valve, E; X, a rod connected to the valve, E—such rod receiving motion from a bell crank lever, Y, mounted upon a fixed stud, Z, which is the fulcrum thereof. The operation of this arrangement is as follows:—Assuming the several parts to be in the position shown, upon motion being imparted to the rod, or ram, A, in a downward direction, it will appear evident that as the pieces, B and D, are brought into contact with the levers, Y and R, they will impart motion to the levers, N and P, and valve, E, and so produce the following effect:—Suppose the clack, S, to be closed, the descent of the cataract, M, will cause the lever, $K^1$, which is connected to the throttle valve, to be acted upon, and the steam pressing against the inner surface of the clack, S, and rushing past the clack, $S^1$, will cause this last-mentioned clack to be closed, and the opposite one to be opened, and the steam be allowed to pass into the cylinder, and cut off by the rod, Q, uncovering the opening, *g*, in the port, G, after it has passed the induction pipe, when the entrance of the steam will balance the pressure on the other side of the clack, $S^1$, and the rush of steam past the clack, S, will cause it to close, and thus cut off the steam at that part of the stroke required.

*Claim.*—The inventor claims the application of this new construction of valve to engines of every description, in which steam is to be used expansively.

*Patent-office and Designs Registry, 210, Strand, Sept. 17.*

IMPORTANCE OF CORRECT STEAM-GAUGES.—The awful explosion on board the *Cricket*—which has undergone such searching investigation, and which is very generally attributed to the fixity of the safety-valves, and the inefficient state of the steam-gauges, by which it was impossible to ascertain the state of the steam in the boiler, or its pressure—will, it is hoped, insure more care in the selection of these necessary adjuncts. In our advertising columns will be found a notice of an improved steam-gauge, made by Mr. Baker, which is far superior to those which have hitherto been in general use. In the old gauges, it is necessary to add to the declared pressure of the left-hand column on the graduated scale the weight of the mercury, which is 1 lb. for every two inches, and is indicated on the right hand of the glass. In Mr. Baker's gauge he has added the weight of the mercury to the steam-pressure, which is indicated on the left hand; and the right hand he has graduated with the temperature, on Fahrenheit's scale, of the steam, at each amount of pressure respectively. The length of the tube, and the contents of the bulbs, are regulated on philosophical principles, and the improvements in the scale are certainly important.

# Original Correspondence.

## IMPROVED METHOD OF TREATING COPPER ORES.

SIR,—I read your remarks in the last Journal on my patent for reducing copper ores, and beg to offer you my thanks for this first earnest of a disposition to discuss the merits of an invention intended, and certainly calculated, to overturn the antiquated and clumsy method of reduction hitherto adopted by the copper smelters—the bequest of their great grandfathers—with scarcely a subsequent change for the better. I am fearful, however, that the hope you express, that Cornwall will not lose this opportunity to emancipate herself from the trammels of dependence in which she has been so long held, is doomed to be disappointed—at least, so long as the practice prevails amongst mine adventurers of dividing their entire profits every two months, without a reserve of capital upon which to fall back in the interval, whilst turning their produce to the best account. I visited Cornwall soon after I took out my patent, and endeavoured to interest the adventurers in its favour, pointing out the great benefits which would arise to them from smelting their own ores on the mine; but, besides doubts and fears, pertaining to a new invention, I was told that the necessity of having the cash proceeds of their ores every month—first to pay wages and merchants' bills, and next to make a dividend at the end of the second month—would form an impracticable bar to its adoption by the adventurers, who, I was informed, would prefer the smaller immediate advantage to the greater prospective one, to be secured by a little delay. This argument was not advanced by the adventurers of one or two smaller mines, but uniformly, including those of the largest concerns, with the further expression of an apprehension, that the combination of the smelters would prevent their disposing of either ore or copper, as a punishment for their temerity in setting so powerful a body as themselves at defiance. Incredible as must be this statement to an enlightened commercial body, it is yet, nevertheless, literally true; and I, thenceforward, made up my mind to forego any further efforts to force my invention on the attention of adventurers, until I was in a position to invite them to the inspection of my works, and to prove to them, by the unanswerable argument of success, that, unless they seized the opportunity, and secured to themselves the benefit, it would pass for ever from their reach, since the dead capital required for works to reduce all the copper ores raised in Cornwall, would not exceed a fraction of some one of the large capitals sunk in buildings and machinery by the present smelters, and especially if appended as a subsidiary to each mine. But the benefits of my process are not confined to the diminished expenses, and consequent increased profits, of smelting. My refuse, at the lowest estimate of value, will more than pay all the expenses of reduction. By using iron in the precipitation of the copper, I obtain its equivalent of sulphate of iron or green vitrol; and of this article I have nearly five tons for each ton of copper precipitated. This substance cannot be looked upon with indifference at the present day, when so many suggestions are being made for disinfecting sewage water, cess-pools, and night-soil, and fixing the ammonia as stable manure and urine tanks—for all which purposes it will be found the cheapest and most effectual agent. Besides this, there still remains the oxide of iron of the ore, which may be used either as an iron ore for smelting, or for mixing with night-soil, &c., as a substitute for the sulphate—oxide of iron, next to carbon, being known to possess the greatest power of attracting and fixing the ammonia. Where salt water has been used in the process of copper reduction, the refuse will also contain a large portion of soda, ready fitted for the purposes of manure.

You will do your readers, and the public, an essential service by making yourself master of the details of the process and its results, and advocating its adoption, if useful—whilst I disclaim all pretence of disinterestedness in the suggestion. I have made a discovery; and, if valuable—and I am ready to participate its advantages—I have no reason to be ashamed of urging its merits on public attention.

A scientific examination of, and report upon, its merits, is about to be made by the Cobre Company; and, when complete, I shall be enabled to furnish you with a copy. In the meanwhile, I shall be glad to exhibit and explain every part of the process. I enclose some of the precipitate copper as it is gathered from the vats, before washing and pressing, preparatory to melting. The quality of the copper has been pronounced, in the Birmingham market, equal to the "best selected;" and, if of uniform quality, as an article much wanted in the market. FREDERICK BANKART.

9, *Clement's-lane, Lombard-street, Sept.* 23.

[We need hardly add, that we shall readily afford space for the report of the Cobre Company, or any other remarks Mr. Bankart may deem of importance to the public, as explanatory of the value of his invention—our columns always being open to such particulars. The specimen of the precipitate copper, which may be seen at our office, appears to us a splendid proof of the complete success of the discovery; it has all the characteristics of a specimen of pure native copper, and appears unalloyed by sulphur, or any other deteriorating substance.]

## IMPROVEMENTS IN SMELTING COPPER ORES.

SIR,—As a constant reader of the *Mining Journal*, I must express the pleasure it affords me to notice in its columns that science, but particularly chemical knowledge, is becoming more extensively applied to the treatment of ores, metals, and other mineral bodies, than it has hitherto been. I hail the adoption of a new plan of separating copper from its natural combinations, which you announce, in last week's Journal, being in successful operation at Swansea, as the commencement of a new era in that important branch of industry. I wish Mr. Bankart complete success. He has broken the ice; and I doubt not but various new plans will follow, as I have noticed that several of your correspondents have been, for a length of time, advocating improvements in smelting copper, chiefly with the view of doing away with the nuisance and damage caused by the smoke from the works, and which is, most assuredly, convertible into sulphur. Some letters have appeared from Mr. Howson on this subject, to which my attention is now directed, by reading in the same Number of the *Mining Journal*, to which I have just alluded—that of last week—an interesting notice, by Sir George Mackenzie, of the sulphur mountains of Iceland. I am not acquainted with the process which Mr. Howson advocates, further than that steam is applied. In this he seems to be following out the natural operation, described by Sir George Mackenzie, as going on in the mountains of Iceland. Water seems there to come into contact with subterranean heat, sufficient to convert it into steam. This must then pass through metallic sulphurets, and sulphuretted hydrogen be formed, which afterwards, passing through a mass of cold porous matter above, is decomposed, and the sulphur deposited on, or just below, the surface. In the notice just referred to, I think there is a great error in estimating the quantity of sulphur used in Great Britain annually at less than 20,000 tons. I believe the quantity to be upwards of 40,000 tons—by far the greatest proportion of which is consumed in the manufacture of soda and alkali. This is a very important branch of manufacture; and I trust the day is now not far distant, when it will be effected entirely by the use of British minerals. I am surprised that the beautiful and cheap article of glass has not as yet been applied to the manufacture of a greater number of articles than it has, since the removal of the duty, and the inquisitorial interference of the Excise. That the manufacture of glass will increase, and with it that of alkali, and the consumption of sulphur, I have not the least doubt. It does appear to me a matter of astonishment, that the mining community should appear to treat all attempts made to establish the use of British sulphur with such apathy and neglect. I do not think a more interesting and important subject can claim the attention of your numerous readers than the union of these three—the preparation of sulphur, alkali, and glass—more especially when produced entirely from British minerals.

*London, Sept.* 21. OBSERVER.

## THE *CRICKET*.

SIR,—To apply the term "safety" valve to those of the unfortunate *Cricket* steamer, I must confess frankly to you, would, in my estimation, be a "misnomer;" and this you will readily concede, when you remember that I have, again and again, condemned the lever valve as worse than useless, by inducing a false security, not only by being constructed usually of a far too contracted diameter, but being especially liable to become *gagged*, as appears to have been the case with those of the *Cricket*—it was because I have strong objections to the lever valve, *toto cœlo*, that I recommended in the *Mining Journal*, on a former occasion, a safety valve of a different construction. In nine cases out of ten, I believe the ordinary safety valve in the contingency of a tendency to explosion, is of no value whatever.—J. MURRAY: *Portland-place, Hull, Sept.* 20.

## THE CATASTROPHE IN LOCHABER.

SIR,—I well remember the two unfortunate gentlemen, Mr. Whithum and Mr. Stericker, who perished on the stormy and dismal night of the 1st inst., *en route* from Glencoe to Fort William. I was on board the *Dolphin* steamer along with them on the previous day, on a visit to Staffa and Iona; they came also by the *Culloden* steamer that morning from Oban; and, on *returning* through Glencoe, I met them at an insulated inn, a few miles from Ballachullish; they had arrived before us, having, like ourselves, taken shelter from the storm. They were both equipped, as appeared to me, in a Mackintosh dress, each with a knapsack usually worn by tourists; I saw no tendency to excess; they had a *small* pocket flask supplied with whiskey, but its size was quite within the limits of moderation and temperance, and it was common to both; about half-past 12 we took leave of them, when they pursued their course through Glencoe, and we returned to Ballachullish. They were found dead near to each other, about 12 miles from Fort William, at a short distance from the roadside, having passed that wild eminence, the "Devil's Staircase." It was a tempestuous night, and the cold intense; amid these rocky fastnesses, at the close of an evening, shortened by the sombre gloom of the storm and the mountain mists, together with the heavy rain which often fell, the weary travellers, strangers to these bleak and barren regions, might wander from their path, and, overcome by cold and wet, having sat down to rest, become torpid and benumbed, and so slept the sleep of death; aggravated would their condition be by the Mackintosh they wore, thus imparting a fatal check to the insensible perspiration, and I can conceive of nothing more dangerous than a Mackintosh dress to the traveller under these circumstances. I feel persuaded that this is the true history of the sad case, being quite convinced, by what I myself saw, that indulgence in the contents of the flask had nothing to do with their unhappy fate. I have been a mountain traveller, and know its perils. J. MURRAY.

*Portland-place, Hull, Sept.* 20.

## VENTILATION.

SIR,—I wish your correspondent would favour us with something *new* in reference to the subject of ventilation, and not treat your readers with the *crambe repetita* of others. The principles he has brought forward are merely those I have already recorded in your columns. J. MURRAY.

*Portland-place, Hull, Sept.* 20.

## EMIGRANT SHIPS.

SIR,—The cases of sickness and aggravation of disease, together with loss of life, in emigrant ships, are circumstances which render it imperative on Government, as they value their responsibility to the public, and the claims of conscience and a higher power, to institute a rigid inquiry and scrutiny into these floating *lazar* fabrics. When the poor emigrant lands on a foreign shore, he is the prey of disease, contracted in impure and pestiferous media on board, and his frame is debilitated and wasted by long confinement in "berths," which bid defiance to a vital atmosphere. It is perfectly sickening, in almost every case, to leave the shore, and go on shipboard, and this at the outset is aggravated tenfold by the voyage. There is no sound or valid reason it should be so; if a free circulation of air be necessary on land, it is surely much more essential at sea. The universally prevalent error, is the outrageous belief, that impure and heated air must necessarily escape, if there be an orifice or opening ABOVE; now, if the air within be *warmer* than that without, the cold air will enter from above, and *prevent* the escape of the impure and noxious air from within. Pipes from the several berths or cabins, passing through the roof or ceiling, should enter the heated chimney of the cook's kitchen, or that of the steam-boiler; this *alone* will maintain a pure atmosphere, which will be readily supplied in continuity, by air from without. J. MURRAY.

*Portland-place, Hull, Sept.* 20.

## ADCOCK'S SPRAY PUMP.

SIR,—Having been engaged a great number of years in developing the mineral resources of the South Wales coal-field, and having also an interest in the success of mining adventures of this district, I naturally hailed with pleasure any improvement or invention that may tend to promote the same; thus, hearing of the successful issue of a trial of Adcock's spray pump, at Mr. Blewitt's pit, and the probability of its becoming really useful and simple in its application, as a means for draining and sinking, as well as permanent shafts, I wrote to a gentleman (than whom a more competent person the principality does not, in my opinion, possess) requesting information relative to the Llanhilleth experiment. His reply being so lucid and matter-of-fact, I cannot restrain myself from forwarding it to you, for publication in your next Journal. I trust my talented correspondent will pardon my doing so, and that he will agree with me in considering "*facts are public property.*"—RHONDDA COLLIER: *Cardiff, Sept.* 1.

"SIR,—I have much pleasure in replying to your letter of inquiry, respecting Mr. Blewitt's pit, at Llanhilleth; and, that you may the better understand the matter, will give you its history from the commencement. Four years ago, this pit was commenced by Mr. Blewitt—the first few yards being sunk in the ordinary manner, with a horse gin. Water, from the Pennant rock, in which the pit is begun, soon became too heavy for horse-labour; and a 36-inch high-pressure 6-feet stroke engine was erected by Mr. Winnington, Walsall, Staffordshire. Whilst the engine was preparing, a drainage-level was driven from the river into the pit, at about 8 yards from the top. When the engine was ready, a 12-inch pump was employed to fork out the water—by means of which the pit was carried down about 17 yards below the drainage-level. A further increase of water overpowered the pump, and the sinking was given up about this time last year.

"Mr. Adcock's spray pump was now had recourse to, and a blowing cylinder, 50 inches diameter, 6-feet stroke, was erected. A public exhibition took place, and some of the newspapers contained flaming reports as to its extraordinary power and *success!* For a minute detail of the apparatus, I must refer you to Mr. Adcock's pamphlet. The point at which the water is collected for the spray pump is 4 yards below the drainage-level—though, at present, the water is discharged a few feet above the top of the pit. The water is collected at the bottom of the pit, by means of a 20-inch pump, with slide-pipe, &c., of the ordinary kind; and this pump delivers the water into a cistern, from which the spray pump takes it to the top of the pit, as before stated. The latter is not, however, capable of discharging anything like the quantity of water that the pump lifts—so that when the water has, from any temporary stoppage, accumulated, so as to give the pump its full supply, the cistern overflows, and the water, in part, descends to the bottom again. As you express a desire for full information thereon, as well as my opinion as to the merits of this apparatus, I will tell you honestly what I think of it, and you are at perfect liberty to make any use you please of the information. For the sake of a position, let us give Mr. Adcock full credit for the advantages claimed for his patent. Taking the circumstances before stated, as to Mr. Blewitt's pit, my opinion is, that the spray pump is wholly inapplicable thereto. The depth below a drainage is only 17 yards, and a pump of the ordinary construction is indispensable for the collection of the water; such being the case, I cannot see what there is to prevent the *pump itself* from not only collecting the water at the bottom of the pit, but also discharging the same into the river. It appears to be such folly in handing the water over to the spray pump, about four yards only below a point where it would discharge itself into the river. Again: suppose the sinkers to have sunk as far down as the slide pipe would admit of, the lower pump must have a pipe added thereto, in the one case—or else it must be altogether lowered down to such a point as would place the slide pipe close up, or nearly so, and the spray pump, with its cistern at the bottom, lowered downwards, and two zinc pipes added to the top, to answer the length so lowered. I need not tell you the importance of sinkers being able to accomplish this work in the shortest possible time—and the greater the come of water, the greater the necessity for dispatch. Contrast the time required for this operation with that of simply adding a pipe on the old system, and judge for yourself. The water rises rapidly, and would soon cover the clack and bucket-doors of your lower pump, when, should anything unforeseen happen to either, you are necessitated to draw your lift, spray pump and all, and begin *de novo*. In short, my advice to you is, that you have nothing whatever to do with it; but carry down your pit by the old system—which, in my experience, has never yet failed. Such is the safety and certainty of action of the old system, that you will, in my opinion, commit a great error by departing from it. Rely upon it, that the spray pump will soon be added to that of 'Shalder's Fountain,' and other pump failures, though possessed of much novelty. I believe Mr. Blewitt's outlay, up to the present time, to be about 10,000*l.*, with a pit 25 yards deep only. This gentleman, for his great enterprise and spirit, deserves better success than he has yet met with; and it must always be a source of regret to see such men unrewarded. I do firmly believe that, had the old system of pumps been continued, the pit would, at this moment, be sending good and large quantities of coal to Newport.

"The spray pump is weekly advertised as being in successful operation at Llanhilleth. What kind of success can that be where, after three months' working, the pit in question is not made one inch deeper than it was twelve months ago? The expenditure of power with the spray pump, as compared with the ordinary pump, I cannot give you; but the man who had the charge of the steam-engine under both systems—and in whose judgment in such a matter I would rely on—assured me, that *three times the power of the engine was expended to discharge the water by means of the spray pump, than that of a common pump.* This is in accordance with my own views on the subject, confirmed, as it is, by that of a gentleman, well versed in such matters, resident near the pit. As you want to discharge your water with *less* power than at present, the spray pump is not the thing for you. One word as to the introduction of this novelty at Victoria Iron-Works. After the recent exhibition in sinking at those works, by means of an incline plane on the surface, with two trams of iron, made to descend the same by their own gravity, and thus raising the bowk, with its contents, to the top of the pit—horses being employed to take the trams of iron to the top of the said incline each time, I shall not be surprised at anything the directors of that concern may do. I advise you, as a friend, to banish from your mind all thoughts of the spray pump. There are other objections, which I have not stated—such as thin zinc pipes being used, which must suffer from the blasting of the rock, &c.—all combining to strengthen me in the opinion I have formed. *I do not believe it practicable to sink the pit in question to the coal, until the spray pump is removed, and the ordinary system of the country introduced.*—*Newport, Aug.* 30."

[We received this letter on the 2d inst., but withheld its publication until a full description of Mr. Adcock's spray pump should have appeared. We have now, of course, but to comply with the renewed request of the writer, and to give it insertion—our object being to afford every opportunity for free discussion on the merits of mechanical inventions and discoveries, and thus enable our readers to make themselves thoroughly acquainted with the arguments adduced in favour of, or in opposition to, the various subjects brought before the public.—ED.]

## RAMBLES THROUGH SOUTH WALES.

SIR,—In answer to Mr. Rambler's letter, which appeared in your columns some short time since, respecting the gigantic pressure engine at Talargoch Mine; as an engineer, living for the last two years within three or four miles of the mine, I have frequent opportunities of seeing this engine, and can vouch for the correctness of Rambler's statement in every respect. With regard to reducing the scale to one-third its present size, I would say, there can be no doubt that the water would be better applied on one-third the area of piston, reducing the column, and pumps lifted in the same proportion; this done, the materials in machinery would be reduced to less than one-half, perhaps to one-third, consequently the saving would be great. The work performed by this engine through the past summer is equal to about 26-horse power; but the same water would have worked equal to about 50-horse, had there been a load applied to it, to have required the engine working with a full column.—AN ENGINEER: *Rhyl, Sept.* 23.

## STEAM v. WATER-POWER—THE FRONGOCH MINE.

SIR,—Observing in your columns letters relative to Frongoch Mine, and, in last week's paper, one from the "Engineer" of that mine—pretended to be in answer to one from "Mine Adventurer," but, in reality, giving certain explanations of what is intended to be done—evading, or mystifying, the plain questions altogether. "Engineer" says, that "'Adventurer' pretends to a knowledge of the drainage of the Cardiganshire Mines, yet he asks these questions," which he calls conflicting. How he can make it appear that "Adventurer" should know his intentions, or attempt to mystify the questions in this way, I am at a loss to know. "Engineer," I have no doubt, fully understood what "Adventurer" meant to ask—which was, I presume, "Whether it was consistent, or prudent, to have removed the steam-engine at any future period; and whether it was prudent to have removed it in the spring of the present year?" If he could have proved the correctness of its removal, "Adventurer" must—and I have no doubt would—have admitted that he had been wrong in his views of mining. This is what I infer "Adventurer" meant by saying—"Matters of such importance to mining." I had hoped that "Mine Adventurer," from the science exhibited in his letter, would have put forward a letter, asking further explanation; but finding he has not done so, I would, with your permission, try to get a fair and straightforward answer to the questions asked by "Adventurer." With this view, as an engineer myself, I will endeavour to lay the matter clearly before him and your numerous readers.

Frongoch Mine, previous to 1840, or 1841, I will presume, had been partially worked by drainage with a water-wheel. This ineffectual working being found very injurious to the profits of the mine, decided the engineer in erecting a steam-engine, of 50-horse power, to assist in times of drought and frost; and has, as I am informed, been effectually used every season since its erection for this purpose. An adit, or day level, has, for many years, been driving, to cut off from 15 to 20 fathoms of pumping; and, add that full to the surface power, this day, or adit, level is now within 12 months' driving of being communicated to the mine; and, in the spring of the present year, the engine taken away, and the reservoir run out—the machinery all idle, and the mine filled with water. If the "Engineer" of this mine did not understand the question before, I think he will do so now. Was it prudent to have removed the engine before the level was brought into the mine? and the hydraulic-engine put to work, even if its removal admitted a question after this was done? I think the "Engineer" states, that "four of the 12-horse power, on a 48 ft. wheel, will be sufficient on the pressure-engine." In this there appears to be a mistake, for, unlike a water-wheel, the cylinder of the pressure must be filled every stroke—let the load lifted be little or much.

"Engineer" will, I presume, in his arrangements, reserve a power for pumping the mine, at least, 50 fathoms below its present bottom. The mine being now 70 fms. deep below the level, will, I suppose, be 50 fathoms below the new level when brought in; that is, calling the new adit 20 fathoms below the present level—consequently, a power sufficient in the pressure-engine should be provided for pumping the present 10-inch pumps 100 fathoms deep; and, as the "Engineer" states, the new level will increase the power of 12 horses on the wheel, 48-feet in diameter, to 47-horse power, I presume he looks for a little more than 31 fathoms fall in his column for the pressure. To carry out this arrangement, it will be necessary to provide a cylinder of 21 inches in diameter. To perform an 8-feet stroke, will require 19·24 cube feet of water—say, five strokes per minute = 96·20 cube feet per minute. This brings me to the statement put forward by the "Mine Adventurer:" he said, "he would call the contributing ground a square mile, and rain fall 60 inches, but both of which (he said) he had over-rated." I have looked at the Ordnance map, and find the water-shed to the reservoirs about 400 acres, and will estimate the fall of rain at 51 inches, which, I think, will be near the thing. It might have been estimated at a little more, if the ground had been in the side, instead of the very top, of the hill—as this ground is said to be. The available water for machinery, I will calculate at 34 inches—leaving an average supply of 93·92 cube feet per minute—scarcely enough to work the engine five strokes per minute. It may be said, that less speed will keep the mine dry: then, I take it at three strokes per minute—leaving about 35 cube feet per minute for dressing power, applied on a 48-feet water-wheel = 2½-horse power constant, or about 5½ for 12 hours per day, and six days per week.

From what I have heard of Frongoch Mine, I take it to yield a return of 80 tons of ore per month—laying in 700 tons of stuff to be put through the crushing-mill. This will require, "for vein stuff, from the primitive clay-slate, at least, 10-horse power, jigging-machines; 2-horse power, and slimes dressing; 1-horse power, for 12 hours per day, and six days per week—leaving the dressing power minus 7½-horse power, for 12 hours per day, and six days per week. Now, it appears clear, that if the hydraulic-engine is constructed to pump the mine 50 fathoms below its present bottom, that then the dressing power will be insufficient. "Mine Adventurer" was perfectly clear in his statements, which Mine "Engineer" tries to mystify. He did not argue, that "steam-power should be applied, if water-power could be obtained;" but merely argued, that "if a sufficiency of water could not be obtained, that it was better to employ steam, to make up the deficiency, than let the mine lie idle in frost and dry weather." "Engineer" adverts to mines paying with water power, that would not pay with steam. This assertion was wholly uncalled for. Let him point out a mine, dependent on water-power, which pays when working, spring and fall, three or four months at a time, and lies idle a part of winter and summer, that would not pay very much better if steam-power were employed to make up the deficiency.

I trust I have made my meaning intelligible; and if "Engineer" replies, that he will "stick to the point," it *does* appear to me, that "Engineer," like many others throughout the kingdom, has erected fine "water machines," with too little attention to the manner in which they are to be "supplied with water," or to what that supply is capable of doing. It should be further observed, that, in estimating the rain fall at 51 inches, I have taken an average for five years, on similar mountainous land, and, certainly, one year did not yield 40 inches of rain, whilst the evaporation and absorption would be as much as in wetter years. I will, therefore, take 17 inches off 40 inches, which only leaves available to machinery 23 inches: admitting this, the mine would suffer severely. From this reasoning, it will be seen that the removal of power from any going and profitable mine, where it is impossible to foresee the extent of power that may be required, is an experiment that a prudent engineer would hesitate to hazard. AN ENGINEER.

*Chesterfield, Sept.* 21.

## WATER v. STEAM-POWER—THE FRONGOCH MINE.

SIR,—I have read, with some interest, two letters in your Journal, relative to the "Frongoch Mine," in Cardiganshire: one written by "A Mine Adventurer," and the answer to it, written by a person who styles himself "An Engineer"—upon which, as an adventurer, I wish to make a few remarks, and to see that a fair construction be put upon the object of the "Mine Adventurer's" letter. There appears to me to be a sort of a side-wind attempt at answering the letter, containing questions which he, undoubtedly, has a right to ask, in order to be made somewhat acquainted with the mode of working mines, in which he has laid out capital—which should, at the least, empower him to know something of the hazardous channel in which it is exposed. The very manner in which "Engineer's" letter is commenced, is sufficient to convince any reader that the reply is intended to be slurred over. He says, or would wish to make it appear, that, in consequence of the "Mine Adventurer" being acquainted with the mines in that neighbourhood, he could not wish to have information—meaning, of course, that he could not, or ought not, to wish to have any of the questions put forward answered. Now, I would remark, that, in my judgment, it was solely in consequence of his being acquainted with the mines, that he doubted the utility of removing the engine in question; and that, if he were not acquainted with the mine, nothing, it is probable, in the shape of an error would ever suggest itself to him. But there is—only that the "Engineer" did not discover it before he sent his letter to the press—not an *imaginary*, but a *real error*, in the body of his sentences. I shall not, however, deem this worthy of my further notice, but merely proceed to give extracts of the two letters, in order to enable your readers to judge if the manner of the answers to "Adventurer's" questions is satisfactory.

*Extracts of "Adventurer's" Letter.*—"The Frongoch Mine, with few, if any, exceptions previous to the erection of steam-power, has always been retarded, in winter by frost, or in summer by drought, not from the want of sufficient capacity in the reservoirs," "but of sufficient area in the contributing ground."—"The further question that will arise may be answered by asking, if it has ever, previous to the erection of steam-power, been sufficient? Has it been sufficient through the previous summer? And does not the mine, at every additional yard in depth, require additional power for drainage? Who is to foresee the extent of power that will be necessary for the effectual working of this mine in years to come, at 200 or even 100 yards below its present bottom?—saying nothing of the certainty of an increase of water, by deepening and extending the workings."—"I might, perhaps, be allowed to ask, for what purpose the steam-power at Frongoch had, in the first instance, been erected?—and, whether it was prudent to allow its removal from the mine, where the daily requirement of power is increasing?"

*Extracts of "Engineer's" Reply.*—"I will submit a few facts of the manner of drainage of the Frongoch Mine."—"I wish to show, if possible, by the adoption of such constructed machines," "they are far superior to any other mode of drainage. It will appear to you and your numerous readers" "that nothing would be more commendable or wise in a management, than to make use of the cheapest or best application for that purpose."—"Yet the management of Frongoch still see the means of deriving far greater advantage from the surface-water, by introducing a class of hydraulic machinery."—It is quite easy to show that the average amount of power, when applied in the way intended, will be three times as much as is necessary to drain the Frongoch Mines: to make this intelligible, the hydraulic arrangement, and the position in which it will be fixed, will augment the power from 12 to 47 horses; and, at the same time, the hydraulic engine will not consume but one-third of the water necessary to work the 48-feet wheel, equivalent to 12 horses—besides leaving a surplus of water of 8-horse power, to be applied to dressing, or any other purpose."

These are the answers which the "Engineer" has given to the foregoing questions—which, perhaps, he did not calculate would be brought to such a convenient mode of comparison. My object is not rude interference, but to show that, unless great caution be used in writing on matters of such importance, some unpleasant reflections may be cast on those who have such undertakings to carry out.—AN ADVENTURER: *London, Sept.* 22.

## MINING IN FLINTSHIRE—THE MILWR MINES.

SIR,—In a former communication on mining matters in this district, I alluded to the Jamaica Mine in particular—the absence of capital, spirit, high royalties, &c. Since writing that letter, I have learnt what I am very sorry to hear, of a people in whose favour I was much prepossessed. The Milwr Mines—extensive and productive ones, which some years ago yielded very large and immensely profitable returns to the present company—are now in a state of ruin, attributable wholly to the lack of skill in the conductors of it; that the profits by the present company have been very considerable is well known: and that the conductors, not excepting even the general body of the adventurers, some of whom, it is said, have pretensions to science, have left this concern, which ought to yield large returns to the landowners, thus neglected the opportunity of acquiring a fair profit on the capital invested. For years past these mines have been very ineffectually worked, if working it may be called at all. Any miner from the north of England would at best call it child's play. After what I said in my last letter, which you have kindly inserted, I must, in justice to the lessor, say that leases, as in this instance, may be granted to, and held by, parties in whom no confidence can be reposed, as to the effectual working of a mine. The Milwr Mines, within the last four years, as I have been informed, have by the present company been fairly sold to a new, rich, influential, and spirited one; the day fixed for payment, the money tendered, with all the preliminaries attendant on a sale, amounting to some 10,000*l.* or 15,000*l.*; but from a small or comparatively valueless discovery, although extravagantly estimated by parties unacquainted with these matters, and at random, without the least explanation being afforded to the new company, the agreement has been shuffled through, or broken off, and parties contracting with the present company, as regards the intended operations, as well as others to whom commission on the amount of sale has never yet been paid, have up to the present period been kept in utter ignorance of their intention, not to advert to the heavy expenses incurred in promoting the objects of the company. If my informant is correct, I shall feel that Flintshire has disappointed me, as regards the people; and if not, then I trust my letter may be contradicted. Although irrelevant to this, my letter, I am bound to say that the former Halkin, and the present Mold, Mines, under the management of Mr. John Taylor, of London, stands high in that county as regards openness and fairness of dealing with all parties.—A TRAVELLER: *Coniston, September* 7.

## DOUBLE-ACTION PUMP.

SIR,—I wish to know, through the medium of your valuable Journal, whether you, or any of your readers, have seen practically applied a pump that will act both up and down—making a lift both ways—the water, both above and below the bucket or plunger, flowing through one set of pipes? If so, I wish to know how they act, as far as regards convenience, power and economy. Your aid will oblige yours, &c., a constant reader,

*Budley Green Colliery, Congleton, September* 23. WILLIAM BRADBURY.

[In a former Number of the *Mining Journal*, we described a double-action pump, made by Mr. Clarke, of Temple-street, London; but there were two working barrels, in connection with one lift. We never heard of double action in one working barrel; nor do we see how it could be effected, without great loss of power.—ED. *M. J.*]

## THE GREAT WELSH COLLIERY CASE.

IN THE MATTER OF THE ARBITRATION RESPECTING THE MOSTYN COLLIERIES, NORTH WALES.

In the commencement of the present year, the Honorable Edward Mostyn Lloyd Mostyn, M.P., commenced an action of covenant against the well-known firm of Messrs. Eyton, of Flintshire, who were his tenants, to recover compensation in damages for certain breaches alleged to have been committed by them in the course of their working the above collieries. The cause was to have been tried at the Cheshire Assizes, last spring; but, shortly prior to the period of their arrival, an order of reference was agreed to between the parties, whereby the questions in dispute were referred to the award and final determination of James Barstowe, Esq., of the Temple, barrister-at-law; and that learned gentleman, having consented to act in the matter, he accordingly proceeded in the execution of the order.

For the plaintiff there appeared, as counsel, the Attorney-General, Mr. Crompton, and Mr. Cowling. For the defendants, Mr. W. N. Welsby and Mr. Atherton. The solicitors for the plaintiff were Messrs. Williams and M'Leod, of the Temple, London; and for the defendants, Messrs. Littledale and Bardswell, of Liverpool.

The ATTORNEY-GENERAL opened the case for the plaintiff, and stated that the defendants having, in the year 1829, obtained a lease of the Mostyn Collieries, had since that period worked them at very considerable profit; but the plaintiff was advised, that the manner in which the operations had been conducted was highly objectionable, and he felt himself bound to call upon the defendants for compensation for the injuries they had done to the property. He described the collieries as extending under the estuary of the River Dee, at this part about six miles broad, beneath which they had been worked for a considerable distance. That their situation on that account, and for other reasons, was most peculiar. The seams of coal were very numerous, the principal ones worked being the Kannel coal, the Five-Yard coal, the Three-Yard coal, the Two-Yard coal, the Durbog coal, and the Stone coal. The first was about 7 feet thick, the next three, being nearly of the thicknesses indicated by their names, and the others being somewhat less than 6 feet thick. That all these seams lay at an acute angle downthrow, of 1 in 3, and cropped up to the surface, just on the verge of the shore. That in some of the seams the coal was of two kinds, and was occasionally affected by slight faults. That, consequently, great care was necessary in conducting the works, in order to prevent any thrust, or creep, occurring; because the seams being so contiguous to the surface, and that surface being the sandy bed of an estuary, and the seams being so liable to be acted upon by any undue weight, owing to their steep declivity, there would, if any accident occurred, be considerable hazard of the sea being let in, and the mines inundated. He stated, that he should show that, in the year 1837, and again in 1838, thrusts had occurred in these mines from too great a proportion of coal having been excavated, and from the works having been carried upwards too near the estuary. That these thrusts had occurred in the third seam in the series called the Three-Yard seam; that they had extended thence to the Five-Yard seam above, thence to the Kannel coal, and thence to the surface; and that an irruption of the sea had been the consequence. That these thrusts had long ago subsided, and the water had been partially stopped; but that, before recommencing the works in the Three-Yard seam, a pillar of solid coal had been left as a barrier, or support, to check the further progress of the thrusts, and to act as a protection to the succeeding works, which had been since very extensively carried on with safety. He observed that, after these events had taken place, Mr. Matthias Dunn, of Newcastle, had surveyed the collieries periodically, on behalf of the plaintiff, and had given directions in writing on the defendant's maps, as to the proportions of coal to be excavated and left. That these proportions, though considered by the plaintiff's witnesses quite inadequate to the support of the works, under their very peculiar circumstances, had, nevertheless, been disregarded by the defendants, who conceived that even Mr. Dunn's precautions were unnecessary. That, in the beginning of the year 1846, the barrier, or pillar, of solid coal, before spoken of, had been worked; and that (the learned counsel submitted almost as a necessary consequence) another thrust had, in October last, occurred in the three-yard coal, producing the same effects upwards as those of 1837 and 1838, and bringing down the sea into the mine. That this last crush was more fatal than the others; for that, since those had occurred, the defendants had, by means of downhills, driven from former levels, sunk fresh crosses, to the deep of the coal; and that the sea had rushed into, and drowned up, all these parts. That the crush was still continuing, and would probably become united with the former crushes. Another objection made to the general principle on which the mine had been managed, was that it had been worked from the crop instead of the deep. That the only remedy for all this mischief would be a new winning, by means of fresh shafts, sunk to a depth below the present workings, and by surrounding those workings with a solid barrier of coal. In addition to these questions, relative to the working of the mine, the plaintiff contended, that, by the terms of the lease, he was entitled to be paid royalty on coal which had been supplied to the defendants' workpeople, and consumed by themselves, and by some works of theirs adjacent to, but partially unconnected with, the colliery, upon which coal so consumed, the defendant claimed to be exempt from paying royalty. Another objection to the defendants' proceedings was, that they had abandoned certain portions of the mines, and discontinued working them—whilst abundance of coal remained, which ought to have been raised. He concluded by pointing out the various covenants in the lease, under which these objections and claims were raised.

Mr. John Daglish, called and examined by Mr. CROMPTON.—He stated that he is a coal-viewer, residing at St. Helens, Lancashire. That having been required by the plaintiff, in the beginning of 1836, to survey the Mostyn Collieries, and to report upon their condition, he proceeded to do so, and was occupied nearly six months upon the business, and in preparing maps of the works. That the result of his inspection and examination of the mines, was his conviction that they had not been worked in a fair, proper, and workman-like manner. He described the mode of working the veins of coal to be as follows:—Two shafts had been sunk for winding, and one for pumping. From the winding-pits, crosses had been opened, traversing the coal measures at different depths from the surface; the first was 50 yards deep, the second 70, the next 100, the next 130; and from these crosses the coal had been excavated upwards, in wickets and thrillings. The proportion of coal which had been excavated was upwards of 65 per cent., and in many places much more had been taken away. That, in his judgment, this was too great a proportion to be excavated with a mine situated like the present. That not more than 50 per cent., as the maximum, ought to have been got. That in some parts of the colliery, the coal had been excavated up to within about 30 yards of the bed of the river, and that this quantity of covering was far too slight for the safety of the mine. He had observed, from the defendants' plans, that in 1837 and 1838, thrusts had occurred in the three-yard seam of coal, at the works from the 100 yard level. These thrusts had extended upwards to the surface, and the sea had been let in. In witness's judgment, the cause of those thrusts was the taking away of too great a quantity of coal, and leaving pillars insufficient to support the superincumbent weight. He stated, that after the crush of 1838, a large block of solid coal had been left to check the thrust, and keep it off from the future workings, farther under the river, and that the block had appeared to answer its purpose most satisfactorily. That, although it was very important that this block of coal should have remained, the defendants had, within the last 12 months, commenced working it away. That, in October last, a crush again occurred, in the 100-yard level, of the three-yard coal, extending upwards to the surface, and bringing in a large influx of water from the sea. That, in witness's judgment, this crush, though at present 200 yards to the north of the crush of 1838, would meet it. That the effect of those thrusts would be to render it impracticable to continue working the colliery with the present means; and that the only remedy would be to make an entirely new winning, at a depth below the existing cuttings, leaving a barrier of solid coal to encircle the present works, and prevent the thrusts from extending to the new ones. That he had carefully estimated the expense of this, and found it would amount (including the value of the royalty on 50 per cent. of the barrier of coal) to the sum of upwards of 30,000*l.* The next question to which his attention had been directed, was whether the defendant ought to pay royalty upon coal supplied to the workmen, and upon coal supplied for the use of the colliery works, for some of the defendants' own consumption, and in a variety of other ways. To the best of his experience, there was no established custom or usage throughout the trade upon the subject, the parties always agreeing between themselves what should be exempt from royalty and what should not: that in this case, there appeared to be no exemption. Accordingly, not being able to obtain access to the defendants' books, he had adopted the following method of ascertaining the quantity of coal thus consumed:—He first ascertained the area of coal which had been excavated, then found the specific gravity of the coal in air and water, and thus calculated the total quantity which had been got. From this he had made certain deductions for loss in working, and having determined the net quantity to be charged against the defendants, the quantity on which royalty had been paid was deducted, and the difference gave the quantity on which royalty had not been paid. Having been furnished with the average price realised, he had applied that price to such quantity, and thus obtained the amount of royalty payable under this head.

Cross-examined by Mr. ATHERTON.—Witness admitted that thrusts were frequent in some mines, but these were cases where the mines were under dry lands, where the coal had been once gone over, where the seams were few and thin, or where it was of no consequence if the surface were damaged. He had had no experience in mining under a sea or river, but had worked under navigable canals. Faults would not of themselves bring on crushes—they would accelerate them. Had he been tenant, he would have left about 70 per cent. the first time of going over, and would afterwards have gone over the mine a second time, and excavated as much of the pillars as the roof would afford to be removed. The time required to work the barrier proposed to be left, would be about two years, and it would be the next coal in the order of working. He had not made any deduction on the ground of that time being necessary for realising the royalty.

William Storey, of Bishop's Auckland, Durham, called and examined by Mr. COWLING.—Witness stated that he is a coal-viewer. That he had been engaged upwards of 40 years in the most extensive way. That he held several appointments as viewer to collieries, and had had the management of two collieries, which were worked under the Dee—namely, the Ness Colliery, on the Cheshire side, and the Dee Bank Colliery, on the Flint side. That he was well acquainted with mining under rivers and seas. He had been applied to by the plaintiff, to examine the Mostyn Collieries, and had done so, and the result of his survey was, that, in his judgment, they had been improperly worked. Too much coal had been taken away, and too little support left. The working of the block of coal left after the thrust of 1838, he condemned as most injudicious. The removal of this barrier had disarranged the subsidence which had taken place in the stratification, after the crush of 1838, and had set it again in motion. That the subsequent works, further to the sea, having by this means an undue weight cast upon them, had been unable to resist it, and hence the crush of 1846. The water which had been brought into the mine, he considered to come from the sea; and, in his belief, the present and former creeps, though at present some distance apart, would eventually meet. No remedy would be effectual, except a new winning, the expense of which had been estimated, including the loss on the coal to be left as a barrier, at 30,000*l.* In addition to this, he considered it would be necessary to continue the present engine at work, so as to keep down the weight of water over the new works. He had calculated the annual extra expense occasioned by pumping out the new influx of water; and, taking it to be spread over a period of 21 years, it would represent, in present cash, a sum of 15,000*l.* With regard to the question of royalty, he had gone over the calculations of Mr. Daglish, with a view to their correction, and had found them accurate. There was no usage or custom in the trade known to him, whereby the lessees were entitled to any exemption from royalty on coal consumed by their workpeople, or for any purposes in connection with the works, or by the lessees themselves; but it was always matter of contract between the parties what, if anything, should be exempt. He complained of the defective ventilation.

Cross-examined by Mr. WELSBY.—Witness had ceased to have the management of the Dee Bank Colliery for some few years. The Ness Colliery he had superintended about 20 years back. The quantities of coal excavated in those collieries was very much less than in this colliery. The present crush could not be worked through; the expense would be great, the mine would not be rendered secure, and the crush would be sure to follow any workings made in continuation. Had had great experience as to thrusts and creeps. This was not a creep from a soft floor, but was produced by weak pillars. He admitted, that some pillars which he saw standing were not excavated at the rate of more than 51 per cent.—but said, if all had been left like them, they would still have been all standing. He was certain, weakness of the works was the cause of the crush, in connection with the cutting of the solid block left in 1838. Considered that creeps of such magnitude as the present could always be prevented, by proper precautions being observed.

James Easton, of Earsden, Durham, examined by the ATTORNEY-GENERAL.—Witness stated, that he is a coal-viewer, of nearly 20 years' practice. That he had great experience in working under seas and navigable rivers. That, at the plaintiff's request, he had examined the Mostyn Collieries, and was of opinion that they had been worked in an unfair, improper, and unworkman-like manner. He considered, that with a colliery so situated, the defendants should have worked from the deep; but they had, on the contrary, got the coal from the crop, and worked downwards. He had considered the state of the works, with reference to the crushes of 1837 and 1838, and also that of October last, and felt satisfied they had been brought on by excessive excavation: the works had been carried too near the surface. The coal on the deep had been got at by downhills from the different crosses, instead of by means of levels from the shafts. He had examined the water in the mine, and considered it came from the sea; its taste confirmed him in this belief, and the sands of the estuary showed a depression corresponding with the crush below—clearly proving the connection between them. He had examined the the pumping engine, and found her to be worked beyond her fair power. As to the remedy for the thrusts, nothing could be effectual but a new winning, sunk to a depth beneath any existing works. He had assisted in making the estimate of the cost, and considered the amount stated by the preceding witnesses to be moderate. He complained of the defective state of the ventilation of the mines. As to the royalty, he had gone over Mr. Daglish's calculations, and found them accurate. There was no usage known to him by which lessees could claim exemption from royalty on coals consumed by the workmen, or the other modes in question; but it was always determined by special arrangement what should, or should not, be exempt. He had applied another mode of ascertaining the quantity of coals excavated. The accounts furnished by the defendants to the plaintiff, stated the number of colliers' pitches, or baskets raised: witness had measured the cubical contents of these vessels, and, multiplying that by the number given in the accounts, he had got a gross total, from which he had deducted the quantity accounted for, and thus ascertained how much remained unaccounted for.

Cross-examined by Mr. ATHERTON.—The advantages of working from the deep would be, that if a crush happened, the damage would be comparatively unimportant, from diminished risk of water; and that more coal in the end might be got. Witness admitted, that water acting upon a soft floor might produce a creep, but he saw no water here. Has seen brine springs in a mine, and known the water to cease, but not where there was access for a feeder. If the floor were of a friable character, it might be subject to swelling, and, with the aid of water, a creep might be brought on. The floor of this coal, however, seemed to be of the ordinary hardness.

Edward Potter, of the Fence Houses, Durham, examined by Mr. CROMPTON.—Witness stated, that he is the manager of the South Hetton Colliery—the largest in the north—had great experience in mining under the sea, and under navigable rivers. He had surveyed the Mostyn Collieries at the request of the plaintiff, and inspected their state and condition; the result of his examination was the conviction, that they had been unfairly and improperly conducted. He attributed the thrust that had occurred last October to undue and excessive subtraction of coal. He fixed the maximum quantity to be taken at 50 per cent. He observed that, where that quantity had been left, the works stood; and he was convinced, that the crushed parts had far more than 50 per cent excavated. No other cause could be assigned for the thrust. Situated as these mines are, he condemned the principle of working from the crop instead of from the deep: he strongly deprecated the thinness of the cover which had been left over the upper works, considering that the sea was overhead. The interference with the block of coal left after 1838, he considered to display no acquaintance with the science of mining, or unpardonable want of caution, because the weakening of that wall would necessarily bring upon the works situated farther forward, the weight which had previously been arrested by it. Among other objections, he complained of the almost total want of standage room in the mines. The engine, he considered, incompetent to the load upon her, and he knew of no efficient remedy for the injuries which had been inflicted upon the collieries, than the new winning, the expense of which had been estimated, with his entire approval and sanction, at 30,000*l.* Any other mode of attempting to rectify the evil would prove but of temporary avail; it would require unceasing repair, and ultimately turn out useless. The proposed new winning, though apparently an expensive affair, was by far the most economical. On the question of royalty, he stated his experience to be, that no usage whatever existed as to exemptions; that in all cases the parties had a perfect understanding with each other, what should, or not, be allowed to be exempt. He had examined the several modes of ascertaining the quantities unaccounted for, and found the calculations to be perfectly accurate. The fairness of taking the cubical contents of the colliers' pitches or baskets, he considered to be settled, by the fact, that by that process the Excise revenue had been estimated.

Cross-examined by Mr. WELSBY.—Had been frequently consulted as a viewer upon the proper mode of working mines situated under rivers and sea. The reasons in favour of working from the deep are, that the coal can be got more easily, by taking the shaft lower down, and working upwards, and with greater safety. That such reasons are applicable to all seams under land having a rapid dip, but particularly where there is water above; in the end more coal may be got. Mines where the coal lies at a great angle require more support. A soft wet floor might bring on a creek; the floor of this mine is not more soft than is ordinary. Faults will not produce a creep, without improper working—they may conduce to a creep. Creeps do occur in mines, but they are the exception; we always consider them injurious. Knows of creeps being worked through—for instance, at the Walker Colliery, but that is level. From what I know of the Mostyn Colliery, the crush cannot be securely worked through. I cannot see where the water comes from, except from the Dee; but, come from where it may, it injures the mine. He had considered the subject of a remedy, and felt certain the one recommended was the cheapest and the only secure one.

[*To be continued in next week's Mining Journal.*]

## THE LIVERPOOL DEPUTATION AND THE RAILWAY COMPANIES.

On Thursday, a deputation, consisting of Mr. D. Neilson, Mr. S. Woods, Mr. Healey, and others, deputed by the Liverpool Stock Exchange, waited on the chairmen and directors of the principal railway companies, in accordance with the wishes of the entire members of the Liverpool Stock Exchange, to take into consideration the present state of railway property, and to adopt such measures as might be deemed advisable.

The deputation first proceeded to an interview with Mr. George Carr Glyn, M.P., the chairman, and the directors of the London and North-Western Railway, who met them at the Euston station, where Mr. Neilson intimated the views that were entertained by the members of the Liverpool Stock Exchange, to the effect, that the present depression of railway property was being greatly aggravated by the enormous sums the railway companies were attempting to obtain, and that perseverance in such a course would perpetuate the embarrassments that exist, not only in the railway interest, but in every branch of the commerce of the country, a catastrophe to be remedied and relieved by a cordial union among railway companies. On arriving at Euston-square, the deputation were met by Mr. Glyn, Mr. Hudson, M.P., Mr. J. Ellis, and Mr. Smith.

Mr. GLYN, in reply to the representations of the deputation said, he was not aware that he could add anything to the declaration he had already made public when addressing the proprietors of the London and North-Western at the half-yearly meeting last month. The directors of the London and North-Western were fully determined to carry out the declaration—namely, that they should not enter into any new contracts connected with bills for lines that were granted last session, excepting under very special circumstances, should any such arise.—Mr. HUDSON, as the representative of the Midlands, Eastern Counties, and other companies, concurred in this, and renewed the declaration he had made to the same effect as Mr. Glyn, in the fullest and most forcible way.—The deputation then dilated upon what they conceived would be the advantages that would accrue from an aggregate meeting of the different railway companies.

The directors present replied, that they did not entertain the same views of the advantages to be derived from an aggregate meeting, seeing that the circumstances, financial and otherwise, of the several railway companies were so diverse and varied, as to render it next to impossible that all should concur in one specific mode of action. The deputation, however, were perfectly at liberty to make use of the unqualified declarations of Mr. Glyn and Mr. Hudson in any future conferences with other companies. It was right, however, they should know that a considerable portion of the calls that were now being made by the various companies, of which Mr. Glyn and Mr. Hudson were the representatives, were for the purpose of paying off debentures, and a very large sum had within a very short period been repaid to the Bank of England on that account thus being again recirculated, and returning into the hands of the mercantile community; consequently, the calls which paid off these debentures were calls which would have fallen on the proprietors, if the debentures had not been issued as far back as the years 1843 and 1844. After considerable discussion, the deputation withdrew.

The deputation next proceeded to Paddington, where, by appointment, they were received by the chairman and directors of the Great Western Railway Company. There were present Mr. Charles Russell, the chairman; Mr. Mills, of the firm of Glyn, Halifax, Mills, and Co.; Mr. Frederick Pratt-Barlow, director of the Waterford, Wexford, and Wicklow, and other railways; Mr. Rufford, banker, of Worcester, chairman of the Oxford, Worcester, and Wolverhampton Railway; and Mr. Charles Saunders, the secretary. Having stated the tenor of their previous interviews with Mr. Glyn, Mr. Hudson, and Mr. Chaplin,

Mr. RUSSELL replied, that he doubted very much whether it was in the power of any railway company to pledge itself distinctly as to any course that might be pursued; that the Great Western Railway Company had for some months past been doing all they thought they could do with propriety to limit the calls upon the proprietors, and to retard rather than accelerate their works; that it was the intention of the Great Western strictly to act upon those principles of general policy—but that when they came to the consideration of any particular lines, especially those where contracts had been taken, and where

engagements had to be fulfilled, they could not undertake to alter them. He intimated a belief, that if the directors of the principal lines were brought together in the mode that had been suggested by the deputation, it would be productive of some advantage; and he recommended that the deputation should be satisfied with a general concurrence of railway companies in their views; but, that if it seemed to be the desire of the railway companies themselves that there should be a meeting, he (Mr. Russell), would certainly attend it, if he found that his own board approved of his doing so. After some further observations, pointing out what he thought were difficulties in the way of the deputation, he concluded, by assuring the gentleman composing it, that neither he nor his brother directors wished to throw any impediments in the way.

Mr. Mills, and the other directors present, expressed their cordial concurrence with the views enunciated by the chairman; and, after some discussion, during which it was suggested that the contracts for works should be thrown over a longer period, the deputation retired.—They then had an interview with Mr. Chaplin, M.P., chairman of the London and South Western, and his colleagues, when they were assured by Mr. Chaplin of the anxiety of himself and colleagues to suspend the works in connection with the South Western system as much as possible; and as far as was consistent with their engagements before the public, to avoid the pressure of calls as far as possible; that he, and his brother directors had seriously discussed the question at their board, and had limited the expenditure accordingly. He expressed his desire to fall in with the views of Mr. Glyn and Mr. Hudson, and said he would have no objection to attend at an aggregate meeting of the companies; and if others were prepared to specify what limit they would put to their transactions, he would be prepared to fall in with it—but it would be highly requisite that some judicious distinction should be drawn, so as to prevent lines that had but comparatively slight public pretensions, being allowed to have an advantage over those whose pretentions were far above them.

Subsequently the deputation waited on Mr. Ricardo, M.P., and the directors of the North Staffordshire, at the offices of the Electric Telegraph Company, in the Strand.

Mr. Ricardo said, that whatever the chairman of other companies, from patriotic promptings or considerate motives, may have told them, he believed that every company would act for its own, irrespective of the general interest altogether; this, he believed, was the only way in which these matters could right themselves, and that contracts never succeeded, that were made of this description. The only assurance that he could give them was, that it was not the intention of the North Staffordshire to make any call, at least during this year; but, if it were to the interest of the company to make a call, and he considered that it was to the interest of his shareholders to raise the money, he should not hesitate to do so, irrespective of every other consideration. He should be governed entirely by what he considered to be his duty to his own proprietors; and he believed that every other company, whatever they might say, would be governed by the same principle. If it were to the interest of his proprietors to protract the works, he would do so, but not under any other consideration. Under the circumstances, he thought that any attempt at any general line of conduct for the companies would prove unsuccessful and abortive—a great many of the railway companies had brought much of this embarrassment on themselves. Instead of looking for sound constituencies, they had by illegitimate means induced weak people to enter into the undertaking—people who never contemplated the completion of the undertaking, but simply a share transaction; and he did not see why prudent people should be called on to make any sacrifice for those who had been imprudent.

Mr. Macgregor, the chairman of the South-Eastern and Dover, who, with his colleague, Mr. Pritchard, and others, received the deputation, announced that they would do all in their power, by a prompt and judicious curtailment of the expenditure, to lighten the burden, and to defer the calls. In pursuance of this, they had already adopted resolutions authorising them to take loans to the extent of 200,000*l.* They were also engaged in carrying out a large financial measure, which would enable holders who had the means to pay up their shares, and for which they would receive an adequate remuneration; while, on the other hand, the directors would *pro tanto* be relieved from making calls which, at a time like the present, pressed so heavily.

The London, Brighton, and South Coast, intimated through their chrirman, Mr. Grenfell, M.P., their readiness to concur in any measure that might be agreed to by the general railway constituency.

The views of the directors of the Great Northern appear to be, that the entire matter is purely in the nature of a commercial transaction between the railway companies and the public. The public have made engagements as binding in their nature as any that could be contracted between one merchant and another, and on the faith of which the railway companies have taken powers from Parliament.

The Shrewsbury and Birmingham and Stour Valley Companies, through their chairmen, Mr. Ormsby Gore, M.P., and Mr. Knox, appear to be of opinion that they have no choice but to proceed, having made contracts which they cannot suspend or protract without compensation to the contractors; did they do so, the rates for labour and material might, in another year, cause the cost of the contracts to be doubled. They would only, during the present pressure, proceed with the heavy parts of the line.

Several influential railway authorities are of opinion that a board of commercial men ought to be appointed to adjudicate the question, or that some measure should be introduced early in the ensuing session, for the purpose, similar to that introduced by Lord Dalhousie, to enable insolvent companies to wind up. The deputation having now waited on all the leading railway companies, return with the above results to Liverpool.

---


**ROYAL GEOLOGICAL SOCIETY OF CORNWALL.**—The THIRTY-FOURTH ANNUAL MEETING of this Society will be HELD in the MUSEUM, on FRIDAY, the 1st October next, at noon.—The officers and council will assemble in the same place at Eleven o'clock.

It is respectfully requested, that communications intended for the meeting may be forwarded to us at the earliest convenience of the authors. By order,

SAMUEL PIDWELL, } Secretaries.
L. R. WILLAN, }

N.B.—The usual ordinary will be held at the Union Hotel, at Three o'clock.
Penzance, 1847.

**PRACTICAL GEOLOGY AND MINING.**
KING'S COLLEGE, LONDON.

During the ensuing Michaelmas Term, a COURSE of about TEN LECTURES, on the PRACTICAL APPLICATIONS OF GEOLOGICAL SCIENCE, will be delivered by Professor ANSTED, M.A., F.R.S.—Fee for the course, £1 1s. The first lecture will be delivered on Wednesday, 13th October.

The syllabus may be obtained by application to the secretary of King's College, London.
September, 1847. R. W. JELF, D.D.

**CUNNINGHAM & CARTER'S PNEUMATIC RAILWAY** SYSTEM.—A large MODEL of this novel, economical, certain, and safe, SYSTEM OF RAILWAY PROPULSION, being now in OPERATION, the attention of the scientific public is respectfully invited thereto.

Communications, addressed to Mr. Cunningham, at the Auction Mart Coffee-house, or Mr. Carter, Peak-hill, Sydenham, will be immediately attended to.

**ORIGINAL REGISTRY OFFICE, FOR THE SALE AND** PURCHASE OF MINING SHARES.
*No. 28, THREADNEEDLE-STREET, LONDON.*
CROSSMAN, SOMMERS, AND CO., AGENTS.
SHARES FOR DISPOSAL.

| | |
|---|---|
| Coombe Mine | Great Wheal Rough Tor |
| Devon and Courtenay Consols | Princess Royal (St. Agnes) |
| East Birch Tor | Stray Park |
| Gonamena | Pennant |
| New East Crowndale | Trelawney |
| East Wheal Rough Tor | South Wheal Sophia |
| Wheal Essa | West Basset |
| North Wheal Camel | Wheal Susan |
| Wheal Sisters | Victoria Tin Mining Company |

FOR PURCHASE.
West Tolgus West Seton

**SOUTH WHEAL SOPHIA MINING COMPANY.**
*ESTABLISHED ON THE COST-BOOK PRINCIPLE.*
Capital £2048, in 256 shares, of £8 each—for past cost, and future workings.

Notice is hereby given, that NO FURTHER APPLICATIONS for SHARES in this undertaking will be RECEIVED after TUESDAY, the 28th inst.

Offices of the company, 18, Cornhill, where specimens of the ore may be seen, and any information given. By order, JOHN MARTYN, Purser.

**WHEAL ANNA MARIA COPPER AND SILVER-LEAD** MINING COMPANY, DUNSFORD, in the county of DEVON.
*TO BE WORKED ON THE COST-BOOK PRINCIPLE.*

Capital £5120, in 512 shares.—Deposit of £2 2s. per share—which deposit will be paid to the lessee as a bonus.

PROVISIONAL COMMITTEE.

| | |
|---|---|
| Captain W. FULFORD, R.A. | EDWARD RODD, Esq. |
| FRANCIS F. RODD, Esq. | ROBERT H. DAVEY, Esq. |

Mining Engineer—Thomas Moyle.
Purser—Mr. John Dunning, Heavitree, Exeter.
Solicitor—H. W. Hooper, Esq., Exeter.
BANKERS.
West of England and South Wales District Bank, Exeter, and its branches.
Messrs. Glyn and Co., Lombard-street, London.
LONDON AGENT.
W. H. Smith, Esq., R.N., No. 10, Warnford-court, Throgmorton-street.

Applications for shares to be made to the secretary, R. TRIPP, Esq.,—
*OFFICES, No. 12, HIGH-STREET, EXETER.*

PROSPECTUS.

Wheal Anna Maria Mine is situate in the parish of Dunsford, in the county of Devon, about six miles north-west of Exeter.

This most valuable and extensive mining sett has been recently granted by Baldwin Fulford, Esq., at 1-15th dues, for a term of 21 years.

The sett extends in length about one mile east and west on the course of four large copper lodes, and in breadth two miles north and south. In this sett already has been found four east and west lodes, that will average 7 feet wide, near the River Teign, with a very fine gossan about 1 foot from the surface, running about 2 feet deep; all the other indications are of a first-rate order. *Vide* the mining agents' reports.

A general meeting of the shareholders will be called early, for the purpose of electing the directors, when a statement of the further progress of the mine will be laid before them.

The operations of the company are to be carried on under the Cost-book Principle, which exempts the company from the provisions of the Act for the Registration of Joint-stock Companies (7 and 8 Vic., c. 110), the 63d section of which enacts, "Provided always, and be it enacted, that nothing in this Act contained shall extend or be construed to extend to any partnership termed for the working of mines, minerals, or quarries, of what nature soever, on the principle commonly called the Cost-book Principle."

Under the Cost-book Principle, shareholders have the right of determining their responsibility, by giving notice of their intentions to relinquish their shares, &c.

The reports of the mining agents exhibit every probability of this mine becoming a first-rate investment, and likely to become one of the most profitable in the county.

**CRICKET STEAM-BOAT.—HENRY BAKER** begs to call the attention of Steam-boat Proprietors, Engineers, and persons who may possess steam-engines, to his NEWLY-IMPROVED STEAM-GAUGE, for high or low pressure, and for showing the temperature of the steam. The gauges on board the ill-fated *Cricket* were useless—according to the evidence adduced at the inquest—on account of the water and mercury becoming intermixed, at the pressure of 40 lbs. per square inch.

H. B.'s gauges are subject to no such defects, but will show any pressure with accuracy; and had they been used, the accident might have been prevented: they are fitted up in a mahogany case, price £2 2s. each.—HENRY BAKER, Barometer, Thermometer, and Steam Instrument Maker, No. 90, HATTON-GARDEN.

**STEAM TO INDIA** VIA EGYPT, MALTA, ITALY ALEXANDRIA, AND THE PENINSULAR PORTS.
PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civita Vecchia, three times a month.

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.
A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 61, St. Mary Axe, London, where only passages can be secured throughout.

**CUNNINGHAM AND CARTER'S PNEUMATIC** RAILWAY SYSTEM.
DESCRIPTION.

The SYSTEM OF PROPULSION, now submitted to the notice of the public, differs essentially from all the plans hitherto tried or proposed, and is considered to be WHOLLY FREE from the PRACTICAL DIFFICULTIES which have so seriously retarded the application of atmospheric power.

The carriages run upon lines of rails, constructed and laid down as usual, but their propulsion is effected through the medium of rails, attached to the sides of the carriages, which derive their motive-force from being brought into contact with the peripheries of a succession of revolving horizontal wheels, placed in sets of three each, at distances of about 300 feet apart—one wheel being placed outside of each line, and the third in the space between the two lines—all three being connected and put simultaneously in action by air-engines, suitably mounted; these communicate with an atmospheric main, common to the whole series of engines, laid down outside the rails, beneath the surface of the ground.

The shafts of the three horizontal wheels revolve in proper bearings, within an iron case, fixed in a trench beneath the rails, and extending transversely into the banks. The case being made in sections, can be laid down with great facility: it protects the inclosed machinery from injury, from wet or dust, or interference—while access may be readily had to the interior, for the purposes of inspection or repair.

The propelling wheels are themselves all above the ground.

Among the numerous ADVANTAGES arising from this arrangement, the following may be stated:—

The PROPELLING WHEELS being above the rails, no alteration will be required in the rails or carriages, as now constructed.

The PRIME MOVERS, or STATIONARY ENGINES, may be situated wherever fuel is cheap, or water-power exists; and, as they all work into the main tube, no delay to the traffic can occur through the derangement of either of them.

POWER being always in readiness, TRAINS may follow each other in rapid succession—while their starting may be so regulated, independent of the drivers or guards, that it shall be impossible for one train to overtake, or come in collision with, another.

As the number of revolutions of the propelling wheels, and the degree of adhesion of the same, may both, or either of them, be increased or diminished at pleasure, independently of the prime movers, an engine, or engines, will be capable of a greater range than at present.

By this system any kind of work can be performed, as the engines work equally well each way.

No unpleasant effects from gas, steam, or cinders.

Perfect safety secured, by fixed and self-acting arrangements, out of the reach of interference, and entirely independent of attendants.

Great economy in the formation of new lines, from reduced weight of rails and general cost of works, where no locomotive engine is used.

Great economy in the working expenses, arising from the use of stationary power, and the small amount of deterioration of the works generally.

DAILY EXPENSE OF WORKING A DOUBLE LINE,
Of FIFTY MILES long, during a period of 10 hours, with trains starting from each terminus every half-hour.
*SIX TRAINS ALWAYS RUNNING.*

| | | | |
|---|---|---|---|
| Coals for five stationary engines, of 100-horse power each, at 5 lbs. per horse-power—say, 11 tons, at 14s. per ton | | | £7 14 0 |
| Wages—Engine-men, with relief, 10 at 6s. | £3 | 0 0 | |
| Stokers, with relief, 10 at 4s. | 2 | 0 0 | |
| Cleaners, with relief, 10 at 2s. 6d. | 1 | 5 0 | |
| Drivers, with relief, 12 at 5s. | 3 | 0 0 | |
| Guards, with relief, 12 at 5s. | 3 | 0 0 | |
| Twenty men, stationed along the line, at 3s. | 3 | 0 0 | |
| | | | 15 5 0 |
| Repairs of engines, with depreciation, &c., at £200 each per annum, multiplied by 5 = £1000—daily proportion | | | 2 15 0 |
| Contingencies | | | 4 6 0 |
| Total | | | £30 0 0 |

Forty trains, at 15s. per train, £30, being a fraction more than 3¼d. per train per mile.

Parties desirous of viewing the model, or receiving further information, will be immediately attended to, by addressing Mr. Cunningham, at the Auction Mart Coffee-house, Bartholomew-lane, London; or Mr. Carter, engineer, Peak-hill, Sydenham.

**ELECTRIC TELEGRAPH COMPANY.**
*LONDON, 345, STRAND, September 1, 1847.*
COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM of TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, being so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.

STATIONS will BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES and DISPATCHES will be FORWARDED TO, and RECEIVED FROM, all the OTHER STATIONS of the ELECTRIC TELEGRAPH COMPANY.

In order to give to Merchants, Bankers, Manufacturers, and all connected with trade, the greatest possible amount of information, a ROOM will be RESERVED in each of the COMPANY'S STATIONS for SUBSCRIBERS, in which will be received, tabulated, and exhibited, all Intelligence of Commercial or Public Interest—for instance:

SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS.
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c.

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange; in this Station the whole TELEGRAPHIC NEWS of the COUNTRY will be CONCENTRATED, and FORWARDED in EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.

The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT of ENTRANCE to ALL the SUBSCRIPTION ROOMS of the COMPANY—including the Central Station at London.

The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will at all times be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.

Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—

| | | | | |
|---|---|---|---|---|
| London | Chester | Southampton | Derby | Darlington |
| Margate | Liverpool | Winchester | Nottingham | Newcastle |
| Ramsgate | Rotherham | Dorchester | Lincoln | Berwick |
| Deal | Barnsley | Bristol | Chesterfield | Edinburgh |
| Dover | Wakefield | Gloucester | Sheffield | Glasgow |
| Folkestone | Leeds | Cheltenham | Bradford | Scarborough |
| Canterbury | Halifax | Peterborough | Wisbeach | Bridlington |
| Northampton | Rochdale | Yarmouth | Lowestoff | Stamford |
| Coventry | Hull | Huntingdon | Cambridge | Norwich |
| Birmingham | Maidstone | Hertford | Chelmsford | St. Ives |
| Wolverhampton | Tonbridge | Manchester | Ipswich | Ware |
| Stafford. | Gosport | Leicester | York | Colchester |

J. LEWIS RICARDO, Chairman.

**THAMES ECONOMICAL STEAM-BOAT COMPANY.**
(REGISTERED PURSUANT TO ACT OF PARLIAMENT.)
*ESTABLISHED ON THE PRINCIPLE OF CHEAP AND EQUALISED FARES.*

Capital £40,000, in 8000 shares, of £5 each,

On which £2 per share will only be called until after a meeting of the shareholders, approving of a further call to extend the operations of the company.

No call to exceed 10s. per share.
The shares may be paid by instalments.
Each shareholder to receive a bonus of free passage.
Tickets to the full amount of paid subscription.

TRUSTEES.
GIDEON COLQUHOUN, Esq., director of the Colonial Assurance Company, and chairman of the Asturian Mining Company, Walmer Lodge, Regent's-park.
CHARLES COLLETT, Esq., Hammersmith.
DIRECTORS.
J. P. SOMERS, Esq., M.P., Pall-mall, and Sligo.
J. BERNARD, Esq., Gravesend, and Palace Ann, Ireland.
GEO. HUMPHREYS, Esq., 8, Throgmorton-street, City.
THOS. MERCHANT, Esq., 27, Lombard-street.
Capt. W. SMITH, R.N., Westbourne Grove.
EPHRAIM EVANS, Esq., 8, St. Martin's-place.
T. W. WARE, Esq., Brompton, Middlesex.
AUDITORS.
Mr. Horace Bell, 28, Craven-street, Strand.
Mr. Alex. Field, 6, Bridgewater-square.
Solicitor—Frederic Talbot, Esq., 47, Bedford-row.
Engineer—Mr. R. Fell, Broad-street, City.
Bankers—Messrs. Hanbury and Co., Lombard-street.

The object in promoting this company is to provide for the public a safe and economical steam communication from London-bridge to Chelsea, Battersea, &c., and from London-bridge to Greenwich, as fated by all the advantages which improved science can suggest.

The company will run express boats morning and evening.

A considerable portion of the shares having been subscribed for, application for the remainder may be made at the offices of the company, 124, Upper Thames-street; or to the solicitor, 47, Bedford-row, where prospectuses and plans may be obtained, and every information furnished. By order of the board, J. BECKET.

**STRONG MIXING PIG-IRON.**—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late David Mushet, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in these more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and, in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,
Dated June 29, 1847. *Near NEATH, SOUTH WALES.*

**HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS.**
DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.
Dated June 29, 1847.

**MADRAS AND ARCOT RAILWAY COMPANY.**—(Provisionally Registered, pursuant to the 7th and 8th Victoria, cap. 110.)
Capital £600,000, in 12,000 shares, of £50 each.—Deposit 5s. per share.—A proportion to be reserved for Madras.

To be empowered by Charter of Incorporation from the Indian Legislature, and also by Act of the Imperial Parliament, to limit the responsibility of shareholders.

PROVISIONAL DIRECTORS.
JOSEPH ALEX. HERBERT, Esq. (late of Madras), Kingstanley, Gloucestershire
GEORGE RICHARDS, Esq., Park Villa, Regent's Park
WILLIAM DUNBAR, Esq., Upper Baker-street, Portman-square
THOMAS JOHN MOORE, Esq. (late of Madras), Marine-terrace, Brighton
Major WILKINSON (late of Madras Cavalry), Regent's Park
ANTHONY BRECKNALD SOMERSET, Esq., Clifton, Bristol
WILLIAM HATCH, Esq., Inner Circle, Regent's Park
Capt. CHARLES THOMPSON MURRAY, R.N., Lansdowne-crescent, Bath
JAMES HENRY SEARLE, Esq., Skinners'-hall, Edenbridge, Kent.

ACTING DIRECTORS.
JOHN BIRRELL, Esq., Sussex-terrace, Camden-town
SPOTTISWOOD BONE, Esq., 150, Piccadilly
Engineer—William Laxton, Esq., Fludyer-street, Whitehall.
Solicitor—John Robert Chidley, Esq., 1, Guildhall Chambers, Basinghall-street.

*OFFICES, 5, GUILDHALL CHAMBERS, BASINGHALL-STREET.*

The Madras and Arcot line has all the requisites for a railroad: the distance is moderate, not exceeding 71 miles, and the country between the termini may be taken, for all practical purposes, as a dead level. There is already a substantial raised road for carts upon the line, which has successfully proved the capability of such a work to withstand the peculiar source of destructive action enumerated in the court's minute as operating against the railway system in India. The termini are both places of great commercial importance; a large traffic in goods, passengers, troops, and military stores, already exists upon the road, and it passes through a fertile and very populous country.

The extent of the sum named in the recent favourable report made by Mr. Simms, the Government surveyor, is fixed as above, at £600,000, and is fully sufficient to meet every possible contingency.

Applications for shares to be made at the offices, 5, Guildhall-chambers; Messrs. Sadlow Brothers, stock and share brokers, Liverpool; W. Fordyce, stock and share broker, Newcastle-on-Tyne. A. CALVERT SIMPSON, Secretary.
September 14, 1847.

BY HER MAJESTY'S LETTERS PATENT.

**FULLER AND DE BERGUE'S VULCANIZED INDIA-**RUBBER BUFFERS AND BEARING SPRINGS FOR RAILWAY CARRIAGES.

The PATENTEES of this NEW and IMPORTANT INVENTION beg to announce to Engineers, Carriage-builders, and Railway Companies (especially those constructing new lines), that they have now completed their arrangements for SUPPLYING the VULCANIZED INDIA-RUBBER BUFFERS and DRAW-SPRINGS, for Passenger-Carriages, Waggons, Cattle-Carriages, Engines, Tenders, &c., and are prepared to execute Orders TO ANY EXTENT.

On several of the principal Lines these Buffers have now been tried for many months past, under very able superintendence, and with decided success. The patentees, therefore, feel justified in stating, that they are prepared to furnish not only a more efficient Buffer than any hitherto in use, but on terms which will effect a considerable saving to Companies in the first outlay.

Specimens of the various kinds of buffers and draw-springs may be seen, and prices obtained, on application at their offices, No. 9, Arthur-street West, London-bridge, or at their depôt, No. 2, David-street, Manchester.

The patentees will also be happy to furnish full information to all communications by letter, together with drawings of the best mode of application.—The attention of Locomotive Engineers is particularly invited to their BEARING SPRINGS for ENGINES and TENDERS, the recent trials of which have proved most successful.

**IMPORTANT TO RAILWAY AND STEAM NAVIGATION** COMPANIES, MANUFACTURERS, AND ENGINEERS.
W. BROTHERTON AND CO.'S
PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.
N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

**IMPORTANT TO ENGINEERS, MANUFACTURERS,** RAILWAY AND STEAM-BOAT COMPANIES.
Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their
IMPROVED PATENT ELASTIC METALLIC PISTONS.

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

**VIADUCTS AND OTHER RAILWAY WORK.**—The attention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSEL ASPHALTE, as the *only impervious and permanent* covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude.

In order to guard against the use of spurious materials, it is important that all applications for works to be executed be made direct to this company; and, as a further protection, it is suggested that Engineers, Architects, and Contractors, should require a CERTIFICATE from the company that the proper description of material has been used.

Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one. I. FARRELL, Secretary,
Seyssel Asphalte Company, Stangate, London.

**FLEXIBLE HOSE-PIPES** FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.
PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.
VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

**WILLIAM JOYCE, DESIGNER AND ENGRAVER** ON WOOD,
11, *BOLT-COURT, FLEET-STREET, LONDON.*

W. J. respectfully informs AUTHORS, BOOKSELLERS, PRINTERS, &c., that, having had long practical experience in DRAWING and ENGRAVING, of every variety—viz.: Inventions of all descriptions, for Engineers, Machinery, Figures, Landscapes, Architectural and Perspective, Agricultural and Anatomical subjects; Specimen Books for Civil Engineers, Ironfounders, Lamp Manufacturers, Silversmiths, and every other Branch requiring Illustrations, he is enabled to speak with confidence, as to the satisfaction he could give with regard to promptness, accuracy, and economy.

*Weekly and Monthly Publications Contracted for.*



London:—Printed and Published, weekly, by Henry English, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. *September* 25, 1847.

"*" It will at all times save much delay and inconvenience, if communications are directed simply To the Editor,
*Mining Journal Office,*
26, Fleet-street, London.

And Post-Office Orders, &c., must be made payable to William Salmon Mansell as acting for the proprietors.